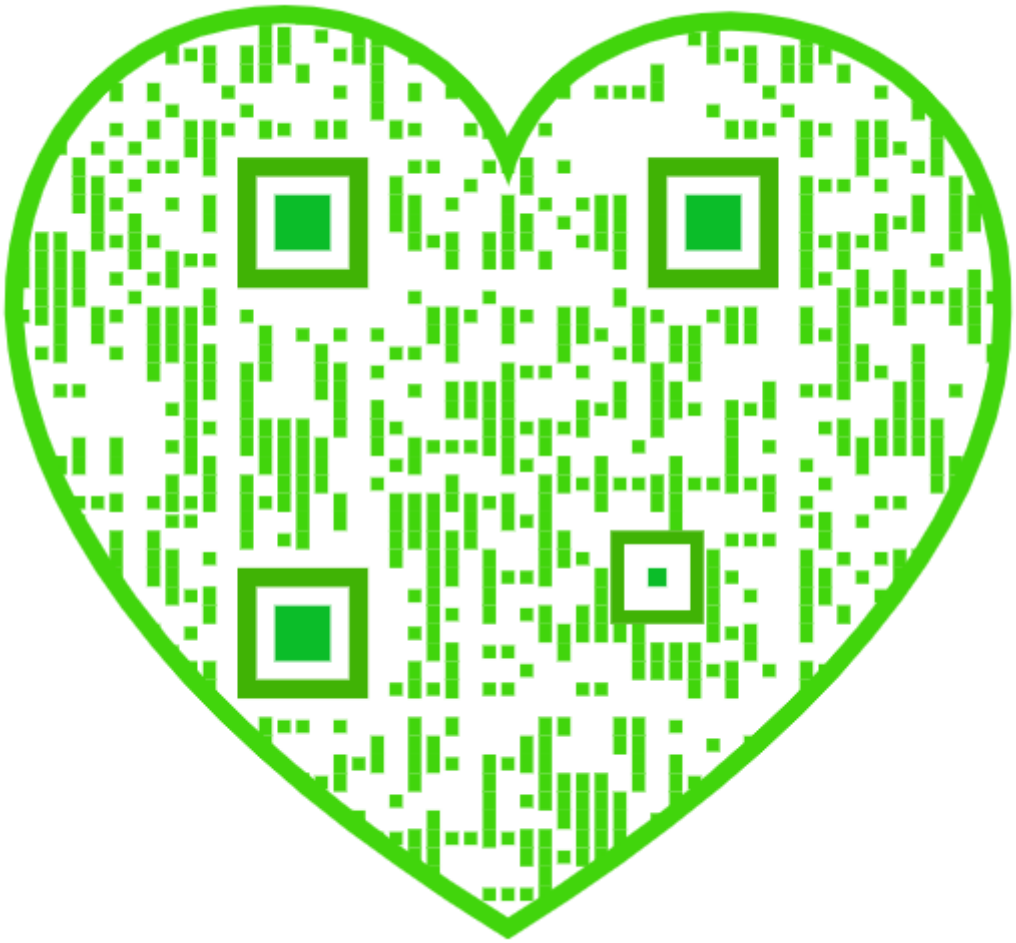

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BANKING PRINCIPLES AND PRACTICE

By

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IN FIVE VOLUMES

VOLUME I

ELEMENTS OF MONEY, CREDIT, AND BANKING

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TO

My Mother and Father

PREFACE

The aim of this book is to give a comprehensive exposition of the theory and practice of commercial banking in the United States. In its preparation the author has been guided by the following principles:

1. To move from general to particulars, that is, from general theory in the first volume and a comprehensive description of the banking system of the United States in the second volume to a detailed statement of the internal organization and of the operations of a member bank in the last three volumes.

2. To present so much of the historical and genetical background of institutions and practices as will give them a true setting and explain their fundamental nature.

3. To approach each problem from the American point of view and describe the American system, statements of foreign practice being given only where comparisons adverse to the American may, it is hoped, lead to reform, or where clarity of exposition may be gained or theories illustrated.

4. To feature the legal phases of American banking, characterized as it is by legal restraints, regulations, and promotions.

5. To emphasize the national banks, because while they are fewer in number than the state banks, they have larger resources and uniform charters, operate under the same law and supervision, and all belong to the federal reserve system, a centralizing scheme which, it is hoped, will in time envelop and control all banks.

6. To approach the problems from the point of view of a very large bank, in the metropolis of the country, in Wall Street, the financial center of the western world and nearly as important as Lombard Street, London.

7. To describe banking practice in as general terms as possible as a functional thing to be carried out in any bank however much

differences of internal organization may vary the details of execution.

8. To present an intimate correlation of banking theory and banking practice, giving in the first volume the underlying theory of money, credit, and banking as a prerequisite to an effective presentation in the remaining volumes of the organization and practice of the system as a whole and of the individual member banks of that system, and indicating at every opportunity in the treatment of the internal and external operations of a bank the theory underlying the practice.

The operations of a modern bank cover both domestic and foreign business. In this book, those pertaining to domestic transactions and handled for domestic clients, which of course constitute by far the larger proportion, are treated in Volumes III and IV. While all the domestic operations of a bank are so interrelated that a clear line of cleavage is difficult to draw, the description of the internal organization of a bank, of the operations concerned with cash, deposits, and letters of credit, and of the work of the bookkeepers and auditors, is treated in Volume III under the rather general title of "Cash and Deposit Operations." The operations pertaining to discounts, loans, credits, commercial paper, and investments are treated in Volume IV, under the general title of "Earning Assets."

The operations pertaining to foreign business are treated in Volume V.

It is a pleasure for the author to acknowledge his great debt to the many persons who have helped in the preparation of these volumes. He is particularly indebted to the staff of the National City Bank of New York where during his employment the book was started. Although this employment gave instance to the book, it has wholly outgrown the original plan and in its completed form does not in any way purport to describe the actual operations of that or any other specific bank, but rather of a generalized bank.

To ascertain data on specific points it has been necessary to write hundreds of letters to various federal and state officials and to banks and banking institutions throughout the country, and acknowledgment is here made of the courteous replies thereto. Many others have shown equal courtesy in personal interviews. Mr. Carl Llewellyn kindly read and criticized certain chapters having a legal nature. Finally the author is deeply grateful to Miss Clara B. Underwood for her painstaking work in the preparation of the copy and proof.

RAY B. WESTERFIELD.

New Haven, Conn.
December 6, 1921.

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Banking Principles and Practice

VOLUME I

ELEMENTS OF MONEY, CREDIT, AND BANKING

CHAPTER I

METALLIC MONEY

Relation of Money and Banking Principles

A bank is an institution for the custody, loan, exchange, or issue of money and credit, and for facilitating the transmission of funds by bills of exchange. Banks deal in money and in credit, which is the deferred payment of money. The principles of banking therefore are inextricably involved with the principles of money and of credit.

Money is of two kinds: metallic or commodity money, and paper or fiduciary money. Such metallic money as is not standard money is also fiduciary in character. This and the next chapter contain a discussion of metallic money, which is followed in Chapters III, IV, and V by a discussion of fiduciary money—a form of credit issued by governments and banks and characterized by general acceptability. Of the many forms of credit issued by banks only bank notes enjoy general acceptability. Such notes are fiduciary money in every essential, and in some countries they constitute the bulk of the circulating media. In other countries bank deposits are a more important medium of exchange, in spite of the fact that their acceptability is restricted. Letters of credit and acceptances are also other important forms of non-circulating bank credit.

The exposition of the nature and laws of money and credit contained in the chapters referred to is an especially proper and useful introduction to the discussion of bank operations and functions taken up in Chapter VI. There it is explained how bank deposits and note liabilities arise in a variety of ways, but chiefly through loans and discounts. By means of such loans and discounts the business of the world is effectively carried on.

The last five chapters of this volume deal with the distinguishing features of the modern bank as regards both organization and operation, the features being discussed from the point of view of the need in response to which they have arisen. A glance at the titles of these chapters will show that there is, first, a need of facilities for performing the functions of deposit, note issue and discount, and, second, a need of safeguarding the interests alike of the bank, of its patrons, and of the public.

The First Exchanges

Inasmuch as the principles of money and banking are closely related, it seems logical in a study of banking to inquire first into the history of exchange and the functions of money. The first exchanges were probably in kind. This method, known as "barter," is very primitive, restrictive, and wasteful. Few exchanges can take place, for several reasons: the coincidence of mutual wants in amounts, time, and place is unlikely; certain commodities which A may wish to exchange for articles belonging to B may not exist in such units as B may wish or be willing to take; A's surplus goods may exist at a time when B has no exchangeable commodities, although it may be a time when B desires A's goods, and if A's goods are perishable, exchange by barter would result in great waste; similar waste and restriction would exist where the surplus products of a producer or community were in demand in another locality whose surplus products did not coincide with the demand in the former.

Primary Functions of Money

The burden of the method of barter is reduced where some commodity is quite generally in demand in a society. The possessor of surplus commodities is willing to accept this article of general demand, knowing that it can be used later in exchange for particular goods he may then need or desire. Goods which he cannot get by direct exchange may thus be procured indirectly.

A commodity may be in general demand by reason of its power to satisfy directly man's desires and needs; objects of food, clothing, decoration, and the like do this. But when once adopted, always by an unconscious process, as a medium of exchange, the commodity is received and wanted primarily for its exchangeability, and a prime use or function of it is to facilitate exchanges. The commodity becomes the foundation upon which a new economy rests, the economy of division of labor, of separation of employments. Producers eventually produce articles to exchange, not for specific goods but for general purchasing power; they specialize their production and sell to a general market. The exchange values of their products in terms of the commonly acceptable mediums are spoken of as "price"; to receive the medium for goods is to "sell," to give the medium for goods is to "buy." The medium is money and may be any commodity having general acceptability.

But a second function is apparent: the values of salable commodities are measured and stated in terms of this medium. The comparison of values becomes possible when values are expressed in a common standard. Money becomes the common denominator of value and, besides making exchanges easier, makes them definite.

For wants to be wholly coincident in time is quite impossible; A may not want B's product at the particular time that B wishes to dispose of it. But the exchange value may be determined at any time and a contract drawn by which A promises to pay B so much of the money medium at a future date, and in exchange for this promise receives, at once or when he wishes, B's product. Money, in other words, becomes the standard of deferred payments, performing thereby its third fundamental function. The seller is willing to agree to accept the money, because he is confident that social custom will not change meanwhile and that the medium will still be generally acceptable in exchange for things that he may desire.

Minor Functions of Money

In addition to these three fundamental functions of money there are many minor functions. One of the latter, important in banking, is the storing of value against emergencies. As will be explained later, credit-issuers, such as banks and governments, hold on hand reserves of the money commodity. Other commodities may be and are, directly or indirectly, used to store values; the money commodity, however, by reason of durability, stable value, and small bulk, may perform this function better than other commodities.

Moreover, just as money acts as a means of storing values and making payments over periods of time, it is used to facilitate payments over distances, a capacity which rests upon money's common acceptability in distant marts and upon its portability. This function has been very much reduced by credit operations, but continues for the settlement of ultimate balances.

Characteristics of Commodities Used as Money

The commodities which have been used as money have been many and various, and have possessed in varying degrees the qualities which enabled them to perform all or some of the functions of money more or less adequately. When any commodity becomes an object of general desire and acceptability, it is rudimentary money. Such a commodity is therefore intimately related to the social and economic activities of the people. A commodity generally acceptable in one community, however, may not be so in another, and its acceptability in a community may not be lasting. For instance, wampum shells, because of their general demand for decorative purposes, functioned well as money among New England Indians, but the influx of Europeans and the changes in social and economic life of that district destroyed the usefulness of wampum as a money commodity.

To be suitable as a circulating medium, the commodity must have utility other than monetary; it must be divisible with-

out loss of value; it must be portable, with relatively large value in small bulk; it must be malleable and recognizable when stamped; it must be uniform in composition and quality; and it must be durable and able to resist wear and tear. To serve as a standard for deferred payments and as a store of value, its value in exchange should be as stable as possible; such stability would tend to result from limited and steady production and broad usage. All these qualities, and others which might be suggested, give to the commodity its essential characteristic, namely, universal exchangeability in both time and place.

Metals as Money

Historically considered, the evolution of money as a commodity is characterized by the tendency of metals to supersede all other forms of money in the more advanced communities, and by the tendency to progress from the less valuable to the more valuable metals. The result is that gold, which possesses the desired qualities to a higher degree than the other metals, has become pre-eminently the universal money article. The settlement of big purchases, debts, and balances is made in terms of, and by the transfer of, gold. For certain purposes, however—for example, small transactions—other metals are more serviceable, their lower value making possible a larger weight for small values. Hence in the United States the contemporary use, along with gold, of silver, nickel, and copper; these latter, however, are recognized as subsidiary to gold.

Coinage

Metallic money may circulate by weight or by count. In its earliest form it circulated by weight, but the practice was very inconvenient. So long as money circulated by weight, there was no misapprehension as to the nature of money—it was a commodity exchanged in kind for other commodities, and the barter nature of the operation was clearly evident. To introduce circula-

tion by count, it was necessary for an authoritative person or institution to issue pieces of the metal uniform in size, content, and design, and attest to this uniformity by the imprint of his or its stamp. Such pieces had to be so designed as to maintain their full weight. When they were so designed, any reduction by erosion, sweating, clipping, and the like, being easily detected, would render their acceptance improbable except by weight. The act of manufacturing uniform coins and stamping them in some way as a guaranty of their purity and of their weight is termed "coinage."

The confidence of the commercial public in these coins is much greater if the general government does the coining, although there is no reason why a private coiner cannot coin as competently. The state's duty of enforcing contracts and imposing penalties, and the requirements of revenue, caused the state to safeguard the manufacture of a sound and reliable medium of payment. Coinage has therefore become a state monopoly, and the legislative body defines the name, weight, purity, and metal of the different coins; and in order to maintain the public confidence in these coins, it proscribes all private coinage and prosecutes counterfeiting. Quite the world over, coinage is vested in the state.

Legal Tender

One of the necessary functions of government is the adjudication and final settlement of contested rights and contracts; another is the levy and collection of revenue and the quittance of the revenue payer from obligation. To perform these functions, it is necessary for the state to legislate as to which coins of the realm are legal tender in payment of debts contracted in terms of money, and which are acceptable to the state in settlement of revenue obligations and court decrees.

A legal-tender law determines the debt-paying power of coins and has no reference to their purchasing power, which may differ

from their debt-paying power. A legal-tender law, moreover, pertains only to debts contracted or decrees handed down in terms of the money in general, and does not prevent contracting parties from naming the specific money in which payment is to be made. If a debtor offers a legal tender in settlement of his debt, the creditor is obligated to accept this or receive nothing. The legal-tender quality may be defined in law as to its extent, that is, it may be full and unlimited, or limited. For example, certain foreign coins may be made legal tender at a specified discount from their face amount, or, as is the case in the United States, silver half-dollars may be made legal tender for $5 or less in one payment.

Brassage and Seigniorage

The coinage laws of a state also determine the charges for coinage and the freedom with which the state will coin for an individual any bullion he may have and wish coined. Since coins are manufactured articles, the actual expense of coinage appears to be a legitimate charge to the person bringing bullion for coining. Such charge is called "brassage." The state, however, sometimes uses its monopolistic position to charge more than this actual cost. The profit to the government in such a case (including the brassage) is called "seigniorage" and may be so fixed as to bring large returns to the government. The charge of high seigniorage amounts to a depreciation of the coinage to that degree, if the government coins and puts into circulation this seigniorage. If the state charges no brassage, it is said to have "gratuitous" coinage.

Charging seigniorage has been resorted to for several purposes. Kings have been known thus to depreciate the currency for fiscal purposes. To stop persons from melting coins, a seigniorage charge is effective, since an ounce of coined metal is then worth more in exchange than an ounce uncoined. Likewise, to prevent its exportation, a seigniorage charge suffices, since the coins are

acceptable in the foreign country at only the market value of their metal content. To keep down the size of a coin made from low-value metal, a high seigniorage is effective, thus rendering copper cents and other such coins convenient in size and economical in manufacture.

To the degree that the nominal value of a coin represents seigniorage, it becomes a fiduciary form of money. The holder then depends upon the government, and no longer upon the market, to maintain the value of his coin. In this respect there is no essential difference between a silver dollar, which represented in 1920 about 25 per cent seigniorage, and the greenback, which represents 100 per cent seigniorage. This phase of the subject is treated in Chapter III.

The state may proclaim itself ready to coin any amounts of bullion brought to it by individuals. This freedom conferred by the state is "free" coinage. Under free coinage the state may or may not charge brassage; the United States has, at different times in the past, tried each plan. Neglecting interest loss, free coinage with no brassage or seigniorage imposed renders the price of bullion and coins practically the same, since conversion from one to the other is open and free.

Bimetallism versus Monometallism

Up to and well into the last century the coinage systems of progressive nations were bimetallic. That is, there were: (1) free and unlimited coinage of both gold and silver at a fixed legal ratio of weights of the gold and silver coins, and (2) the full legal tender of both at these ratios. The mint or legal ratio was fixed between 15:1 and 16:1, and conformed roughly to the market ratio prevailing at the time of legislation.

Bimetallism was based upon the assumption that it was desirable to continue the circulation of both metals as primary money; it was argued that a higher stability of values would result, since price levels could rise or fall only as the combined

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volume of the two metals rose or fell, and that the probability was small that the two metals "would change in value in the same direction and in the same degree at the same time." This combining of volumes would result in a sort of compensating value—if silver were the cheaper metal on the market it would flow to the mint and into coins; gold, on the other hand, would flow to the market and be melted down. The result would be that the market value of silver would rise and that of gold fall until the market ratio was again brought into conformity with the mint ratio.

The gold standard assumes that gold alone is a better and more stable measure of value than gold and silver taken together. Under bimetallism the fluctuations caused by shifts, from gold to silver and from silver to gold, which occur as the market ratio adjusts itself to the mint ratio, are disturbing to the financial and commercial world. No mint ratio which will bring permanent bimetallism can be determined upon, since the accidents of production and consumption of the two metals may bring about the complete expulsion of one of the metals, in which case monometallism of the other will prevail. Whenever the metal in a coin is valued more highly in the market than at the mint, it is either melted or exported; the overvalued metal drifts to the mint, the undervalued to the market. If the supply of the overvalued is sufficiently large, the principle of compensating values which tends to restore the ratio proves unavailing and the complete expulsion of the undervalued metal is inevitable. To keep a bimetallic system in existence therefore requires: (1) that the mint ratio be changed from time to time if the mint and market operations fail to make the two ratios conform, and (2) that the mint ratios adopted among the leading commercial nations agree. The former requirement makes possible dangerous disturbances at the caprice of legislators; the latter has proved and is likely to prove a political impossibility, on account of the jealous and independent attitude of each nation in its monetary affairs.

Operation of Bimetallism Illustrated

To illustrate the compensatory theory, suppose we had had bimetallism in the United States during the past generation. The pure content of the gold dollar is 23.22 grains Troy, and of the silver dollar 371.25 grains, these weights being determined by the coinage law and representing a mint ratio ($371.25 \div 23.22 = 16-$) of approximately 16:1. A Troy ounce of gold or silver weighs 480 grains Troy. Under bimetallism, therefore, at the mint an ounce of silver would be worth $1.29 in gold ($480 \div 371.25 = 1.29$), and an ounce of gold $20.67 in gold ($480 \div 23.22 = 20.67$); these would be the "mint prices" and would be constant, except as Congress might legislate different weights for the coins. With free and gratuitous coinage of gold, its market and mint prices would conform, for if the market price of gold bullion should fall to, say, $20 per ounce, the holder of bullion would carry it to the mint and get $20.67; in other words, the mint would provide an unlimited demand for gold at $20.67 per ounce. If the price of bullion should rise to, say, $21 per ounce on the market, holders of coins would reduce them to bullion for sale. In other words the coined gold would constitute a potential supply, as against the industrial uses of gold, and keep the market price down to $20.67. The mint therefore would stabilize the price of gold.

The price of gold is quoted in terms of gold, so likewise is the price of silver. The price of silver will fluctuate with the accidents of its supply and demand. Suppose it fell to, say, $1.20 per ounce; under the conditions of bimetallism given above, the holder of bullion would prefer to sell it to the mint at $1.29 rather than on the market at $1.20. In fact he would use all the purchasing power he could assemble—gold coins and certificates, silver coins and certificates, bank notes, bank deposits—to buy silver bullion on the market at $1.20 and then resell it at the mint at $1.29; and he would use the proceeds of each sale to buy more bullion. This demand for silver would tend to raise its market

price from $1.20 to $1.29, at which price the operation would cease to be profitable. Meanwhile the market ratio of the values of equal amounts of gold and silver bullion (20.67 ÷ 1.20 = 17.22) would shift from 17.22:1 to 16:1.

Suppose, on the other hand, the market price of silver had risen to $1.45 because of a conjunction of underproduction and larger consumption. Then it would be profitable to reduce silver dollars to bullion and to sell it at $1.35 per ounce. The silver in a silver dollar would then be worth in the market more (371.25 ÷ 480 × $1.35 = $1.044) than its face value. The result of this process would be that the supply of silver bullion would increase and its price tend to fall from $1.35 to $1.29, and the market ratio of the values of equal amounts of gold and silver (20.67 ÷ 1.35 = 15.3) would shift from 15.3:1 to 16:1.

It is therefore evident that the establishment of bimetallism tends to make the market price of gold and silver alike conform to the mint prices set by law, and to make their market ratio conform to their mint ratio. This conformity could not be effected if, in the first case above, the silver mines were so prolific that they could keep the market glutted despite an increased demand, so that it would continue to be profitable to carry bullion to the mint—for the coined silver would entirely displace the gold and silver monometallism would supplant bimetallism. Nor could the conformity be effected if, in the second case above, the demand for silver were insatiable, for then silver would disappear from circulation and gold monometallism would prevail. Theoretically, however, for ordinary variations in the relative valuations of these metals, bimetallism would be an effectual conforming force.

Effect of Two Legal Tenders

The displacement of one metal by the other, resulting in the establishment of equilibrium between market and mint prices, operates more exactly if both metals are full legal tenders at the

mint ratio. It is the seller who decides the form of payment he will accept; if asked to take the coined metal overvalued at the mint, he can refuse outright, or can accept it at a discount, or—what amounts to the same thing—ask a higher price for his goods. In paying debts previously contracted, however, legal tender laws apply, and the payer can tender any lawful money, and he will normally pay the metal which is overvalued at the mint. That is, if the silver dollar is a legal tender and silver is selling on the market at $1.20 per ounce, a debt of $1 can be paid with $.928 worth of silver, by first having the silver coined. The metal overvalued at the mint tends to displace the undervalued and to be the circulating medium. This is Gresham's Law. The legal-tender quality therefore helps to drive the undervalued metal from circulation, the only prevention for which is to specify in the contract of debt the tender that will be acceptable. Prices tend to be quoted in the overvalued medium and therefore its purchasing power tends to equal its debt-paying power.

Owing to the higher price level, the country becomes a good one in which to sell and a poor one in which to buy, the balance of trade becomes adverse, and balances must be settled. In international trade, where no international legal-tender laws exist, the seller of goods determines the money medium that is acceptable, and international balances are normally settled in gold; if the seller lives in a silver or bimetallic country, silver may be acceptable. The supply and demand of the metals is therefore international in scope, and if the mint prices of the various countries differ each metal will tend to move to the mint that pays most for it. To be successful, accordingly, bimetallism requires international concert at fixing mint prices.

The Limping Standard

The United States adopted bimetallism in 1792 and continued it with more or less success until 1873 when the free coinage of silver was given up; after a few years (1876) a limited coinage on

government account with high seigniorage was adopted. In 1900 a system of gold monometallism was undertaken, but the old undervalued coins were left in circulation. A country thus having the concurrent use of two metals, one full legal tender and freely coined, the other full legal tender but not freely coined, is said to have a "limping standard."

Relation of Seigniorage to Value of Coins

Given free coinage, a seigniorage charge increases the value of the coined metal by the amount of the seigniorage. The state either keeps a part of the bullion, which it does not coin, or it holds back a portion of the coined metal. So long as the public is willing to accept the coins as money, the value of coins differs from that of the bullion by the amount of the seigniorage.

The seigniorage might be taken out in four ways:

1. The coins might be of the same weight as formerly, but the government might not coin all the bullion presented; the toll of bullion is its seigniorage.
2. Keeping the coins of the same weight as formerly, the mint might coin all the bullion presented, but not deliver back all the coins; the toll of coins is its seigniorage.
3. The mint might decrease the amount of bullion put into the coins and not coin the amount of the bullion kept out.
4. It might decrease the amount of bullion put into the coins, and coin all the bullion, but hold back part of the coins.

The first and third methods would not increase the number of coins in use; the second and fourth would both increase the number of coins and raise the price level.

But the entry of seigniorage, especially when large, into the coins of a country presupposes that the public has faith in the government. So long as the public allows the government to extract the seigniorage and continues to accept the coins generally as before, the light-weight coins will perform all the monetary

functions as well as, or better than, the heavier coins. Assuming this public confidence, the determination of the amount of seigniorage is an arbitrary matter for the government. The percentage of seigniorage may range from 0 to 100 per cent. There is no essential reason why the amount of metal in, say, the dime might not be more or less than it is at present; that is, there is no essential reason why the government should not take more or less seigniorage than it now does, provided the public continues to accept the coins as before.

Means of Maintaining Public Confidence

One means by which the government can maintain public confidence is to limit the number of coins issued; the number of any particular coin issued bears a somewhat steady relation to the volume of transactions conducted with it at the existing price level. The number of dimes, for example, which are needed is determined by the social and business activities and methods of the community under the prevailing price level. So long as the mint uses discretion and increases the number of these coins only in conformity with the people's needs, the coins will be generally acceptable however high the seigniorage. Excessive or too sudden issues may shake the popular faith in the future general acceptability of these coins and lead either to refusals to accept or to acceptance only at a discount.

It is evident that the government could not control the issues of these coins at a fixed seigniorage if there were free coinage, for free coinage throws the control of the coinage supply into the hands of bullion-holders. Consequently when the United States government gave up bimetallism but continued to coin silver, a new system for regulating silver coinage was adopted. Since 1853, whenever any subsidiary coins have been minted they have been made from bullion bought by the government on the market at the prices prevailing there, the difference between the market value and the coined value constituting the seigniorage.

A second method of maintaining public confidence in high seigniorage coinage is to fix its legal-tender quality. To give the recipient confidence in his ability to get rid of it, it is made legal tender, but to protect the creditor from inconvenience and great loss, the legal tender is limited to certain maximum amounts in any one payment. A third method is to make it by law convertible into, or redeemable in, standard money, and for this purpose to maintain a reserve as evidence of the government's ability and willingness to carry out its promise.

In summary, the characteristics of a subsidiary, token, and fiduciary coinage are high seigniorage, limited issue, limited legal tender, convertibility into standard money, and public confidence in the issuing government.

CHAPTER II

HISTORY OF THE NATIONAL COINAGE

First Coinage Act

The first Coinage Act of the United States was prepared by Alexander Hamilton in 1792. It provided for the establishment of a mint and a bimetallic system of gold and silver at a 15:1 ratio; it named the coins—eagles, half- and quarter-eagles, dollars, half- and quarter-dollars, dimes and half-dimes, cents and half-cents—and the weights, metal, and fineness of each, as well as the devices. The dollar was made the unit and defined as 371¼ grains of pure silver. Coinage was gratuitous and free, without preferences as to bullion-bringers. All the gold and silver coins were full legal tender for all debts whatsoever. In 1793, rates were established at which foreign coins circulating in the United States would be legal tender. Coinage of silver was begun in 1794 and of gold in 1795, and the legal-tender quality of foreign coins ceased at different dates as proclaimed by the President or enacted by Congress.

Changes in the Mint Ratio

The 15:1 ratio as ascertained by Hamilton was soon found to be too low. The French had a higher ratio, 15.5: 1, and gold flowed to France where its coinage value was higher. Silver only was coined, and much of that was exported to South America. Bimetallism gave place to silver monometallism. In 1834 Congress attempted to restore bimetallism by readjusting the mint ratio; the gold dollar, which had weighed one-fifteenth of 371.25 grains, or 24.75 grains, was reduced to 23.2 grains, or one-sixteenth of 371.25. This was a 7 per cent debasement of gold, but probably it was better thus to favor the debtor class than to

favor the creditor class by increasing the weight of the silver dollar until the mint ratio equaled the market ratio. In 1837 the fineness of gold and silver coins was made uniform, at nine-tenths, and the ratio was thus slightly changed until it stood at 15.98: 1, where it still stands.

But this new ratio overvalued gold. As gold could be profitably brought from France, silver coins were melted or transported abroad, gold drifted to the mints, and gold monometallism resulted. In 1853, to preserve the fractional silver coinage, the weights of the half-dollar, quarter, dime, and half-dime were reduced, their legal-tender quality limited to $5, and their free coinage stopped.

Thereafter, when new issues of subsidiary silver were found necessary, the mint was empowered to purchase bullion in the market and coin it, charging the profits from seigniorage to the Treasurer of the United States.[1] It was now unprofitable either to melt or export subsidiary silver, since coined silver was overvalued by the amount of the seigniorage. Between 1834 and 1853 gold was increasingly the circulating metal.

Coinage of the Silver Dollar

Between 1861 and 1879 greenbacks took the place of metals; the silver dollar had not been coined since 1834, and when, in 1873, the coinage laws were reconstructed, the silver dollar was omitted from the list of coins. This act later became known as

[1] UNITED STATES COINAGE BEFORE 1878
(In millions)*

Periods	Gold	Silver Dollars	Subsidiary Silver
1793–1805	$ 2.5	$1.4	$ 0.5
1806–1834	13.2	....	37.8
1835–1852	221.0	1.0	38.4
1853–1877	774.1	5.5	106.1
Total	$1,010.9	$8.0	$182.9

* In this table and similar tables presented in millions, figures to the right of the hundred thousand column have been disregarded, alike in items and totals.

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the "Crime of '73," and it was alleged by silver men to be an intentional omission so as to demonetize silver. All independent investigations, however, agree that no such ill purpose was in the mind of Congress. Bimetallism in the United States thus ceased in law; it had existed only in law for two score years.

Between 1871 and 1874 free coinage of silver was stopped in many European countries and big mines were discovered in Nevada. The narrowing market and suddenly increased production caused a remarkable fall in the market value of silver. It became profitable to coin silver dollars again, but the mint had been closed to silver by the Act of 1873. For the next three decades the silver and debtor interests struggled for the remonetization of silver. A series of compromises followed. In 1878 the Bland-Allison Act authorized the coinage of standard silver dollars and made them full legal tender; the Secretary of the Treasury was to buy in the market not less than $2,000,000 worth nor more than $4,000,000 worth of silver bullion per month, and have it coined into such dollars, and pay the seigniorage into the Treasury. Between 1878 and 1890, $378,168,000 in silver were coined at a seigniorage of nearly $70,000,000.[2]

[2] PURCHASES OF SILVER UNDER THE ACT OF 1878

Fiscal Years	Fine Ounces (In millions)	Cost (In millions)	Average Price per Fine Ounce	Coinage of Silver Dollars (In millions)
1878	10.8	$ 13.0	$1.0248	$ 8.5
1879	19.2	21.5	1.1218	27.2
1880	22.0	25.2	1.1440	27.9
1881	19.7	22.3	1.1328	27.6
1882	21.1	24.0	1.1351	27.7
1883	22.8	25.5	1.1174	28.1
1884	21.9	24.3	1.1120	28.0
1885	21.7	23.7	1.0897	28.5
1886	22.6	23.4	1.0334	29.8
1887	26.4	25.9	.9810	33.2
1888	25.3	24.2	.9547	32.7
1889	26.4	24.7	.9338	33.7
1890	27.8	26.8	.9668	35.9
1891	2.7	3.0	1.0901	8.7
Total.....	291.2	$308.2	$1.0583	$378.1

The seigniorage = $378,168,793 − $308,279,260.71 = $69,887,532.29.

In 1879 the subsidiary silver was made redeemable, in multiples of $20, in lawful money, and made legal tender in sums not exceeding $10.

In 1890 the Sherman Silver Act directed the Secretary of the Treasury to buy in the market silver bullion aggregating 4,000,000 ounces, or as much thereof as was offered at less than the mint price, and to issue for it treasury notes of the United States. These notes were made redeemable in coin by the Treasury on demand and were reissuable and full legal tender. This act, which repealed the Act of 1878, contains the famous parity clause, which pledged the United States Treasurer to maintain the two metals on a parity with each other at the legal ratio. No method was prescribed for the accomplishment of this pledge by the Secretary. Provision was also made for the coinage of part of this bullion. After three years' operation and the coinage of $187,000,000, this compulsory purchase clause was repealed.[3]

In summary, the amount of silver dollars coined under the Act of—

April	2, 1792,	was.....			$ 8.0	millions
February	28, 1878,	"	$378.1	millions		
July	14, 1890,	"	187.0	"		
March	3, 1891,	"	5.0	"	570.2	"
Total.....					$578.3	"

[3] Purchases of Silver Under the Act of 1890

Fiscal Years	Amount of Silver Purchased (Ounces in millions)	Cost, or Amount of Treasury Notes Issued (In millions)	Average Price per Fine Ounce	Silver Dollars Coined from Bullion of Act of 1890 (In millions)
1891	48.3	$ 50.5	$1.0451	$27.2
1892	54.3	51.1	.9402	3.4
1893	54.0	45.5	.8430	5.3
1894	11.9	8.7	.7312	0.0
Total.....	168.6	$155.9	$ .9244	$36.1

If and when this silver is coined into standard silver dollars, the seigniorage will equal $(168.6 \times 480 \div 371\frac{1}{4}) - 155.9 = \$62$ millions.

Gold Standard Act

The silver movement came to a crisis in the election of 1896, and in 1900 was finally settled by what has come to be known as the Gold Standard Act. This act fixed the gold dollar, weighing 25.8 grains of standard gold, nine-tenths fine, as the standard unit of value, and provided that "all forms of money issued or coined by the United States shall be maintained at a parity of value with this standard," and that "it shall be the duty of the Secretary of the Treasury to maintain such parity." The manner of keeping gold and silver at par is not defined, but the probable operation of the Treasury would be to stand ready to redeem one with the other.

The Pittman Act

In 1918 the adverse balance of trade between the United States and India, in the face of the necessity of conserving and fortifying our gold reserves during the war, led to the passage of the Pittman Act, which authorized the Treasury to reduce silver dollars, in number not to exceed $350,000,000, to bullion and to sell it at a minimum price of $1 per fine ounce. At the same time the Secretary was authorized to enter into contracts with producers of silver, to buy silver at the price of $1 per fine ounce for the purpose of restoring the bullion taken from the Treasury and sold to exporters to India.

The object of the sales and purchases arrangement was temporarily to provide silver in large quantities for immediate use. The hoard of silver in the Treasury was thus seized upon to settle the adverse trade balance and conserve the gold supply against shipment to the East. As most of the silver dollars were being circulated by silver certificates, the reduction of silver dollars to bullion forced the recall of an equivalent amount of certificates. To provide against the reduction of the currency in this manner, the federal reserve banks were enabled to issue federal reserve bank notes secured by treasury certificates of indebtedness and

one-year treasury notes. These federal reserve bank notes will be retired later, according to the plan, by the issue of silver certificates as silver is repurchased by the Treasury.

The Secretary of the Treasury in executing the Pittman Act decided that, in order to provide for the various items of expense involved in the operations of withdrawing silver dollars and recoining new bullion, it was necessary to fix the price of silver sold by the Treasury at $1.015 per fine ounce. Silver exportations were subjected to licenses, and any silver for which more than $1.015 had been paid by the applicant was denied export license. These restrictions on silver exports were removed in May, 1919. In the interim 271,000,000 silver dollars were melted and sold at $1.015 per ounce, although the market price of silver ranged much higher. In the spring of 1920 the market price of silver fell below $1 per ounce, and on May 17 the Secretary of the Treasury gave standing orders to the Director of the Mint, under the mandatory provisions of the Pittman Act, to purchase, at $1 per ounce, silver —the production of mines and reduction plants located in the United States—up to an aggregate amount of 207,000,000 ounces. This will establish a minimum price of $1 per ounce for American silver for some time to come, but the price of foreign silver may fall below that figure. In February, 1921, was resumed the coinage of silver dollars, of which none had been minted since 1905.

Other Coinage Laws

The Act of 1906 provided for the redemption of copper and nickel coins in lawful money, when presented in sums of not less than $20. When they are presented for redemption in such quantity as to indicate that they are redundant, the Treasury orders their coinage temporarily to be stopped. Numerous other coinage laws of minor importance have been enacted, but the above constitute the fundamental history of our coinage. Coinage is sometimes held to include the making of gold and silver bars.

Bullion Bars

Gold bars are carried by the banks for the convenience of their customers in the city or elsewhere, and are shipped upon request. Gold bullion as held in banks bears the official stamp of the United States Mint or assay office. This stamp, like that on the coins, is the government attest of the weight and purity of the bars. Besides the official seal, weight, value, and fineness, all bars are stamped with the bar and lot number. They are weighed to the one-hundredth part of an ounce, and are computed by the fineness at $20.671834625 per ounce for pure gold. Small gold bars are made with values ranging from $105 to $600; these are used exclusively for domestic purposes and are not exported. The bars in a certain New York bank's vaults on a certain date, for example, ranged in weight and value from 5.14 ounces and $106.19 value, to 525.6 ounces and $10,849.61 value. The larger bars are used almost exclusively for shipment abroad and the smaller ones for reserve and industrial purposes.

Certain bar charges, as given in the following table, are imposed by the government to cover the cost of making; these vary with the fineness and size of the bar. Bar charges as below are imposed when bars are sold or when a depositor requests, directly or indirectly, special sized bars in payment of a deposit of bullion. Gold bars may be sold only when of standard fineness or higher, for gold coin or gold certificates only, and in lots of not less than $5,000. Silver bars may not be sold except upon special authorization.

GOLD BAR CHARGES

	Per $100 Value
Bars of $5,000 in value and over	$.05
Bars of less than $5,000 to $500, assorted sizes	.05
Bars of less than $500, assorted sizes	.07
Bars between $300 and $200, in lots of 20 bars	.09
Bars of a fineness of 999.9, not over $5,000	.09
Bars of a fineness of 999.9, over $5,000	.08

SILVER BAR CHARGES

Bars of standard silver	$.005
Bars of fine silver, not less than 500 ounces	.001
Bars of fine silver, between 125 and 500 ounces	.00125
Bars of fine silver, 125 ounces or less	.0025
Bars of unparted silver	.0025

Foreign Shipments of Gold

When obtainable, bullion is preferred for shipment abroad, but as a rule the supply of large bars is more or less limited. When shipments are heavy, gold coins of the denomination of 10's and 20's are used, preference being given to the latter, as they are likely to average better and the loss from abrasion is not so great. In shipping gold coin abroad, credit is given for the actual weight of the gold and not the nominal value. Each of the various denominations of gold coins is put up by the United States Mint in bags of $5,000 each, the standard weight of which is 268.75 ounces Troy, or about 18.5 pounds avoirdupois; but many bags weighing less are current, and any such bag is likely to contain many coins below the limit of tolerance, that is, coins which have lost their legal-tender quality because of deficient weight. As these short-weight coins are not current, they are stamped "light" by the government, and must then be sold as bullion, the loss varying from ½ to 1 per cent.

Gold Coins in Circulation

The United States[4] gold coins in circulation now are the double eagle, the eagle, half-eagle, and quarter-eagle, containing, respectively, $20, $10, $5, and $2½. The gold dollar, though no longer coined, was made the standard unit of value in 1900, and since 1837 has contained 25.8 grains .9 fine, or 23.22 grains pure gold. An ounce of standard gold, therefore, will make 18.6 dollar coins, or be worth $18.60, and an ounce of pure gold will

[4] For details as to the United States coinage law, weights, fineness, pieces, value, and totals coined, see Report of Director of the Mint, in Treasury Annual Report, 1918, p. 689.

make 20.67 coins, or be worth $20.67. The government has minted other gold coins than the above mentioned, but they are not in general circulation and command a premium as souvenirs. They are as follows: the $3 gold piece, coined by act of Congress in 1853 and discontinued in 1890, the weight of which was 74.4 grains; the $1 gold piece, coined first in 1849 and discontinued in 1890, which was of two sizes, large and small, but with the same gold content; the three issues of souvenir gold dollars, the first in 1902 to commemorate the Louisiana Purchase Exposition held at St. Louis, in which issue two different coins were minted, one with a Jefferson head and the other with a McKinley head; the second in 1904 for the Lewis and Clark Exposition held at Portland, Ore.; and the third in 1915 for the Panama-Pacific International Exposition. Only a limited number of these special coins were minted and they were sold at a premium for the benefit of their respective expositions. In 1916 special $1 gold pieces were issued for the McKinley Memorial.

Silver Coins in Circulation

The silver coins of the United States now current are dollars, half-dollars, quarters, and dimes. Silver dollars were first coined in 1794 under the Act of 1792, and weighed 416 grains .089 fine, or 371.25 grains pure; in 1837 the fineness was made .9 and the weight reduced to 412½ grains, but keeping the pure silver content at 371¼. The coinage of silver dollars was discontinued in 1873, resumed in 1878, discontinued in 1904, and again resumed in 1921.

The subsidiary silver coins (halves, quarters, dimes, and half-dimes) date from 1794 and contained their respective proportions of the silver dollar. In 1853 their weights were reduced from 412½ grains to 384 grains for two halves, or four quarters, or ten dimes. All silver dollars, halves, quarters, and dimes are put up by the mint in bags containing $1,000 each, a bag of the dollar coins weighing 71.61 and of the fractional coins 66.98 pounds Troy.

The commercial value of silver rose very much during the war, due, among other things, to the relative cessation of production in Mexico and elsewhere, its greater monetary use as a substitute for gold coinage in belligerent countries, shipment to India to settle trade balances, and special uses for war purposes; hence the silver content in the silver dollar rose in value and the government's seigniorage correspondingly decreased. The reverse effects occurred during 1920 and 1921 as the price of silver fell again to its former level.

Other Issues of Silver Coin

Various other silver coins have been issued. The trade dollar, issued by the Act of 1873, weighed 420 grains, or 7.5 grains more than the standard dollar. Though intended only for circulation in the Orient, the trade dollars circulated freely in our own country because when the price of silver fell it became profitable to take 420 grains of standard silver to the mint and have it minted into a circulating coin. With a view to stopping this circulation, their legal-tender quality was taken from them in 1876, and the Secretary of the Treasury was authorized to limit their coinage, from time to time, to such an amount as he might deem sufficient for the export demand. This he did in 1877, after $30,710,400 had been issued. In 1887 they were retired and discontinued. Special souvenir silver dollars, known as the "Lafayette dollar," were coined to commemorate the Pan-American Exposition at Buffalo in 1899. In 1892 and 1893 a limited number of souvenir Columbian halves and Isabella quarters were coined. By the law of 1918, provision is made for coining 100,000 silver half-dollars of special design, commemorating the centenary of the admission of Illinois into the Union. Similar laws were passed in 1920 for Maine and Alabama; and the coinage of 300,000 half-dollars commemorating the landing of the Pilgrims was also authorized. In addition to these silver coins, the following have also been coined for circulation: the 20-cent piece,

1875–1878; the half-dime, 1792–1873; and the 3-cent piece, 1851–1873.

Nickel and Copper Coins

The nickel 5-cent pieces of the present were first coined under the Act of 1866. They are composed of 75 per cent copper and 25 per cent nickel, and weigh 77.16 grams. The cent dates from 1792, the earliest being pure copper and weighing 168 grains, while those of the present time are bronze which is 95 per cent copper and 5 per cent tin and zinc, and weigh 48 grams. Between 1857 and 1864 the cent was of a nickel composition, 88 per cent copper and 12 per cent nickel; these coins are frequently found in circulation at the present time. Other minor coins issued have been: the nickel 3-cent piece, 1865–1890; the bronze 2-cent piece, 1864–1873; and the copper half-cent, 1796–1857.

The above lists contain the legal United States coinage. In addition certain coins have been issued by private persons—for instance, the 50-cent and 25-cent pieces issued in California.

Statistical Statement of the Coinage

The present United States coinage is as follows:[5]

WEIGHTS AND FINENESS OF COINS

Double eagle	Gold	$20.00	464.400 grains pure	516.00 grains standard
Eagle	"	10.00	232.200 " "	258.00 " "
Half-eagle	"	5.00	116.100 " "	129.00 " "
Quarter-eagle	"	2.50	58.050 " "	64.50 " "
Dollar	Silver	1.00	371.250 " "	412.50 " "
Half-dollar	"	.50	11.250 grams "	12.50 grams "
Quarter-dollar	"	.25	5.625 " "	6.25 " "
Dime	"	.10	2.250 " "	2.50 " "
Five-cent piece	Copper, 75%, Nickel, 25%	0.05	77.160 grains "	
Cent	Copper, 95%, Tin and Zinc, 5%	0.01	48.000 " "	

The basic metallic stock including both coin and bullion of the United States, as of June 30, was as follows:

[5] All these statistical data are taken from the Annual Reports of the Director of the Mint.

Basic Metallic Stock of the United States

(In millions)

	1913	1914	1915	1916	1917	1918	1919	1920
Gold	$1,866	$1,871	$1,973	$2,450	$3,018	$3,075	$3,112	$2,708
Silver	745	753	858	763	772	745	568	548
Total	$2,612	$2,625	$2,731	$3,213	$3,791	$3,821	$3,680	$3,257

The following table shows the ownership of the gold stock and the purposes which its various parts are serving:

Ownership of Gold and Silver, June 30, 1920

(In millions)

Ownership	Gold Coin and Bullion	Silver Coin and Bullion				Total Gold and Silver Coin and Bullion
		Silver Dollars	Subsidiary Coin	Silver Bullion	Total Silver	
United States Treasury (free)	$ 189	$ 14*	$ 6	$21	$ 42	$ 231
United States Treasury (reserved against United States notes and treasury notes)	152	....	....	....	....	152
United States Treasury (for certificates outstanding)	633	120	....	....	120	754
Federal reserve banks (gold settlement fund)	1,184	....	....	....	....	1,184
National and federal reserve banks	132	65	38	....	104	236
National banks (for clearing house certificates)	9	....	....	....	....	9
Private banks and individuals	405	68	213	....	281	687
Total	$2,707	$268	$258	$21	$548	$3,256

* Treasury notes are secured by the dollars here stated as free, as well as by the gold reserve.

The activity of the Mint of the United States is indicated by the following table which gives the coinage by years and by metal:

COINAGE OF THE MINTS OF THE UNITED STATES

(In millions)

Year	Gold	Silver	Minor	Total
1910	$ 104	$ 3	$ 3	$ 111
1911	56	6	3	65
1912	17	7	2	27
1913	25	3	4	33
1914	53	6	2	61
1915	24	4	2	30
1916	18	8	6	33
1917	.....	29	6	35
1918	.....	25	6	31
1919	.....	11	9	20
1793–1919	3,410	1,067	100	4,578

The location of the metallic moneys of the United States, as of June 30, 1920, was as follows:

LOCATION OF THE METALLIC MONEYS OF THE UNITED STATES

(In millions)

	In the Treasury	In National and Federal Reserve Banks	In Other Banks and in Circulation	Total
Gold bullion	$1,794	$ 15	....	$1,810
Silver bullion	21	....	....	21
Gold coin	376	116*	$405	898
Silver dollars	134	65	68	268
Subsidiary silver coin	6	39	213	258
Total	$2,333	$236	$687	$3,256

* Includes $9,814,000 gold clearing house certificates.

AMOUNT OF TOKEN COINAGE OUTSTANDING, JUNE 30, 1920

Copper cents	$ 1,180,775.36
Copper half-cents	39,926.11
Copper-nickel cents	1,201,273.36
Bronze one-cent pieces	38,922,741.97
Bronze two-cent pieces	570,007.36
Nickel three-cent pieces	655,423.67
Nickel five-cent pieces	53,498,435.05
	$96,068,582.88

Legal Tender of Coins

Certain moneys of the United States are "lawful money." This term is used to denote the legal-tender quality of money, and dates from 1862.[6] Legal tender is a quality given a circulating medium by act of Congress. A form of currency may have such attributes as to make it generally acceptable by custom and yet not possess the full legal-tender quality. Congress by law decrees that a circulating medium must, under specified conditions, be accepted by creditors from debtors in liquidation of debts which do not specify the form of money in which they are to be paid.

Gold coin is legal tender at its face value in payment of all debts, public and private, provided that the coin is not below the standard weight and limit of tolerance prescribed by law. When below such standard weight and limit of tolerance, gold coin is legal tender in proportion to its weight. Any gold coin, if reduced in weight by natural abrasion not more than ½ per cent below the standard weight, after a circulation of twenty years as shown by its date of coinage, and at a ratable proportion for any period less than twenty years, is received at its nominal value by the United States Treasury, but any below this limit of tolerance are to be recoined. Any holder of coin below the limit is not likely to present it for recoinage if it is possible to circulate it, for he will lose its deficiency.

[6] Gold and silver certificates have not been legal tender as between persons, but when held by national banks they could, until 1917, be counted as part of their lawful reserve money. Gold certificates were made legal tender in 1920.

Silver dollars are legal tender at their face value in payment of all debts, public and private, without regard to the amount, except where otherwise expressly stipulated in the contract. Gold coins and silver dollars, being standard, are not redeemable.

Subsidiary silver coins are legal tender for amounts not exceeding $10 in any one payment. They may be presented in multiples of $20 to the Treasurer of the United States or the federal reserve banks for redemption into lawful money.

Minor coins of nickel and bronze are legal tender to the extent of 25 cents in one payment, and they are redeemable in multiples of $20, like subsidiary silver.

United States Mints and Assay Offices

The place of coinage is called the "mint." There are eleven mint service institutions in the United States, situated as follows: coinage mints at Philadelphia, San Francisco, and Denver; mints at New Orleans and Carson City conducted as assay offices; an assay office at New York, which has a large trade in bars of fine gold and silver; and assay offices at Seattle, Boise, Helena, Salt Lake City, and Deadwood, which also function as bullion-purchasing agencies for the large institutions.

The relative size and importance of the coinage mints are indicated by the following figures of the number (in millions) of pieces coined in the fiscal year 1918:

PIECES COINED IN THE FISCAL YEAR 1918
(In millions)

Mint	Silver	Minor	Total
Philadelphia	$ 84.7	$380.2	$464.9
San Francisco	57.9	62.5	120.5
Denver	43.1	85.5	128.6
Total	$185.7	$518.3	$714.1

No gold was coined in the year 1918, the banner year of the mint, when, besides 714.1 million pieces for the domestic coinage, some 52 million pieces were made for the Philippine and foreign governments. The domestic coinage for 1917 was 406.5 million pieces, and for 1916 it was 155 million. The value of the coinage for 1918 was: silver, $35 million; nickel, $4.1 million; bronze, $4.4 million; total, $43.6 million. The seigniorage on the coinage for the year amounted to $13.2 million on the subsidiary silver, and $7.2 million on the minor coins—total, $20.5 million; this constituted a very large part of the total income realized by the Treasury from the mint service, which was $22.8 million. The operating expenses for the year were $2.2 million. To purchase metal for the manufacture of minor coins, Congress appropriates $200,000 as the minor coinage metal fund; there is an additional sum for the alloy metals.

Other Functions of the Mints

Besides coinage, the mint institutions perform other functions:

1. The reduction, until recently, of silver dollars to bullion for shipment under the Pittman Act.
2. The reduction and recoinage of gold and silver coins that are unfit for circulation.
3. The making of assays at nominal cost for the mining industry.
4. The manufacture of gold and silver bars for shipment. In 1918 there were made 105,650 bars of gold weighing 14.8 million fine ounces and valued at $305.9 million, and 12,116 silver bars weighing 4.5 million fine ounces and valued at $3.6 million.
5. The receipt and determination of the values and payment for deposits of platinum, gold, and silver in the form of bullion, plate, and jewelry. These activities were very important during the war. The platinum was refined and made into shapes for the use of the government

institutions. Refineries are located at New York, Denver, and San Francisco.

6. The testing of coins as to fineness, to see whether they come within legal requirements.
7. The manufacture of dies; this is done by the department of engraving at the Philadelphia Mint; in 1918 it made 11,029 dies.
8. The manufacture of medals; 14,531 medals of gold, silver, and bronze, were made in 1918.
9. The Philadelphia Mint is making a numismatic collection, by gift, purchase, etc.

The United States law (Revised Statutes, Section 3547) provides for an Assay Commission to examine and test the weight of the coins reserved at the several mints during the preceding year. This commission counts, weighs, and assays, and acts as a check and proof on the mint officials.

CHAPTER III

CREDIT

Confidence and Time Element

The discussion of money has so far dealt only with the metallic forms. Transactions in which immediate payment of standard metallic money is made are primarily barter transactions—as when one hat is exchanged for one ounce of gold; they are transactions, however, which differ from the original barter transactions, inasmuch as the receiver of the gold does not take it for his present industrial or personal use but as a representative of those things for which he is confident he can exchange it.

This purposed exchange may be direct or indirect. One man, Brown, accepts gold because he is confident that another, Jones, will take it from him for shoes which Brown wishes and which Jones has. This confidence is born of custom and rests upon the inertia of custom to change, and is seldom if ever consciously acted upon. Brown, however, may accept silver or paper which he knows Jones will not accept for the shoes, but which he knows Smith will accept in exchange for gold. That is, Brown knows that by indirection he can get the shoes from Jones. This confidence that Smith stands ready to exchange gold for silver or paper rests upon custom, upon Smith's promise, or upon law or public opinion compelling Smith to make such exchanges. Smith's function is to convert or redeem silver or paper with gold.

Thus the very foundation of the money concept is faith in another. This faith is "credit." "He believes." Brown believes that Jones will accept and Smith will redeem. It is a confidence which extends over a period of time, that is, Brown accepts now, believing that Jones or Smith will accept later. The coin or paper is the tangible evidence of that faith and the measure of its

amount. A gold eagle or a $20 bill accepted by Brown is evidence that he trusts custom, promise, or law to that amount.

The Contract Element

Indeed, Brown may desire the shoes but he may not have gold or another commodity acceptable to Jones, but Jones, having confidence in Brown's future ability and willingness to provide acceptable commodities, may therefore be willing to transfer the shoes to Brown at once and trust him to transfer acceptable commodities later. The payment, in other words, is deferred. Since either man—or both—is likely to forget the exact nature and terms of this deferred payment, some written evidence is usually prepared to describe it. This written evidence may be simply a book entry, or it may be a special instrument drawn up to which Brown subscribes. In any case the credit precedes and exists independently of the instrument; contracts, written or parol (oral), characterize a credit economy and may well be regarded an essential attribute of credits, but emphasis on this feature is likely to becloud the more fundamental element—confidence.

Reduction of the credit contract to writing serves several purposes, but parol credit is just as thoroughly credit as is that evidenced by written instruments. Writing gives the contract legal definiteness; what was possibly vague, easily forgotten, and therefore subject to dispute, becomes definite and lasting. If left in the form of an entry in an open book account, it is still subject to dispute by the debtor, and the burden of proof of its validity and correctness rests upon the creditor. But if reduced to writing and signed by the debtor, the law presumes that it was then and is now valid and correct, hence the burden of proof to the contrary is upon the debtor. Writing also makes the contract more easily transferable. Writing, however, does not change its credit basis; the credit instrument cannot be better than the credit which it embodies; its safety and security do not lie in the form, but in the credit conditions underlying its creation; the

promissory note by which a book account is closed has no greater security than the book account itself; it simply renders the account in a more convenient form for the creditor.

Jones, however, at the time he grants credit to Brown, may not know what specific commodities he may want at the maturity of the credit; it serves his convenience, therefore, to have Brown promise to pay in terms of the most commonly acceptable commodity in the community, which Jones believes he can exchange for things then wanted. It is, therefore, drawn in terms of money. Money is the standard of deferred payment. Credit is the deferred payment. The credit instrument is the certificate of such deferred payment. The four attributes of credit are, therefore, standard money, confidence, time, and contract.

Credit a Substitute for Money

Credit serves the convenience of Brown and Jones in another way. So long as metallic money was passed at the time of exchange, every exchange necessitated the handling and testing of two commodities—the article bought and the gold given. The gold had to be carried to market, and as exchange grew in frequency, volume, and distance, to carry and count metallic money became bothersome, dangerous, and expensive. The receipt of actual metallic money was no advantage except that it might be more widely acceptable than the private credit of the buyer.

If, however, Jones accepts Brown's credit and Brown accepts Jones's credit, the burden of actual money transactions can be greatly reduced. Promises may be balanced against each other and only the net balances actually paid in metallic money. Credit operations, therefore, while making use of standard money as a unit of account and as a standard of deferred payment, obviate to a large degree the use of money as a means of payment; hence credit comes to play an even more important rôle than standard money as a circulating medium. As standard money facilitates

exchange over the barter economy, so credit facilitates exchange over the money economy.

A credit transaction is a form of exchange in which credit is given by one of the parties; it may be a deferred payment either of goods or of money, but it is usually stated, for reasons shown, in terms of the standard money; it is a present transfer of money or economic goods or services in consideration of a promise of a future return of probably greater value. But it may also be an exchange of credit against credit, of credit against a title to goods. To illustrate: Jones may have a promissory note from Brown which arose from a deferred payment for shoes, and Smith may have a similar note against White; Jones and Smith may exchange these credits so that Smith becomes Brown's creditor and Jones becomes White's. Such operations occur every time a commercial instrument is sold for government or bank credit money and constitute the prime business of the banks and of the discount market. In fact, credit transactions constitute practically the whole business of finance as now conducted.

The Personal Element in Credit

It is important to conceive the exact nature of a credit. If Brown promises to pay to Jones at some later date, he creates a property right; Jones thereafter has a claim on Brown and Brown's wealth; the state has found it politically and economically expedient to guarantee, under certain conditions, this right; it is a "chose in action," recoverable by law. Fundamentally it is a *jus in personam*—a right against the person of the promissor, and once in the history of jurisprudence was collectible by forced service from him. Slavery and imprisonment for debt have, however, been abandoned by the civil state, and such rights, in the absence of wealth of the debtor, are rather moral claims against him than anything else. The importance of the consideration of the moral qualities of the debtor by the creditor is, therefore, apparent; his ability to pay is best indicated by his present capital

and his earning capacity, but his willingness to pay depends upon his character.

Credit is deferred payment; the creditor has confidence in the debtor's willingness and ability to pay; both willingness and ability to pay rest upon personal as well as impersonal elements. Willingness to pay is more a personal than an impersonal matter; and ability to pay is rather a matter of capital than of character, although the debtor's character—his business abilities—determine in no small degree his ownership or control of capital. The law supports the creditor as against the debtor who is able to pay but will not; but the law cannot make him willing to pay. Because his willingness is subject to caprice, it is difficult to estimate and so limits his credit to small compass. As business operations and discounting become more extensive and complex, the necessity of eliminating or reducing the personal element of credit or of reinforcing it increases, for intimate knowledge of the personal character of the debtors is more difficult to ascertain.

Secured Credit

The personal element can be reduced by attaching to the credit a concrete article of wealth or property right which, having assured and easily determined value, can be readily sold and converted into money. This insures ability to pay and the law will avail to collect payment. Such is the method of collateral security. The promise in the collateral note is backed by the pledged wealth or property. Ability to pay can also be practically assured by basing the credit upon a strictly commercial transaction the completion of which will put the debtor in funds within the period of the debt. Such credits are said to be "self-liquidating," since they assure the debtor of ability to pay, provided the business is sound. These two methods may be combined in one, the collateral being commercial documents by which the commercial transaction is effected, for example, bills of lading attached to a commercial bill of exchange.

Credit Indorsement and Substitution

The personal element can be reinforced by getting, in the words of the customary expression, "someone to go your security," that is, getting more "names" on the paper to evidence the credit; the purpose of these indorsements is to divide the risks. Synchronous complete failures of all the indorsers are, by the law of chance, very unlikely. Hence the security of the credit becomes as strong as the ability, joint and several, of the indorsers to pay, but no stronger.

The personal element can also be reinforced by getting some party who is better known, stronger in wealth and connection, and with good financial record, to substitute as debtor. The practice of issuing and using letters of credit is based upon this idea. A New York bank makes arrangements with an English bank whereby the latter agrees to accept bills drawn on it by a Brazilian exporter; otherwise the New York importer would have to be drawn on and the Brazilian could get from the Rio de Janeiro bank but a very low price for the bill as compared with one drawn on the English bank. This substitution of debtor constitutes the fundamental difference between the bank acceptance and the trade acceptance.

Commercial and Financial Credits

Credit is deferred payment; there is a period of trust, and it may be long or short. The longer the period the more the contingencies against which the creditor must provide. "Commercial credits" have come to differentiate themselves from "financial credits" on the basis of the term; the former are for 10, 20, 30, 60, 90, and 120 days, and are evidenced by promissory notes, checks, drafts, bills of exchange, acceptances, and so forth; the latter are for periods of 1, 2, 3, 5, 10, 20, and 40 years, and are evidenced by various forms of notes, bonds, and certificates. Commercial or mercantile credits are used to conduct the daily operations of business life. It is always assumed that the money

or goods are to be used in such ways that the debtor will be in a position to realize upon his transaction within the period of the credit and so will be able to pay upon maturity.

Financial credits, on the other hand, being for long terms of years, are issued with the idea that the money or wealth which the creditor contributes to the debtor is for quite permanent use. If the creditor wishes to regain his funds before maturity he does so by selling the credit instrument to another who may wish to become creditor to the debtor; and it is commonly understood that the debtor will never make repayment in his own money or goods, but that the present credit will be met at maturity by refunding, that is, borrowing further funds either from the same creditor or others. There are, however, various practices by which commercial credits function in real fact as long-term credits.

Definition of Commercial Credit

Exact agreement does not exist among financial men and writers as to the definition of commercial credits. In the United States the term "commercial paper" is widely used in a very technical sense, and refers only to such paper as is marketed through note-brokers. Such paper is short term, but is in large part continually renewed at maturity and sold to present holders or others, and therefore represents long-term advances. Another restrictive definition makes commercial credit relate only to credit extensions which facilitate the marketing of products. This definition is too restrictive; industrial loans for the purpose of buying raw materials and paying wages to workers may be as self-liquidating, may be for as short terms, and as safe for temporary investment as mercantile loans. This definition would exclude also loans to speculators and brokers, a considerable part of which are characterized by the two essentials of commercial credit, namely, short term, and self-liquidation. Important differences of opinion as to banking policy often arise from the inability to agree on a strict definition of commercial credit.

Effect of Time Element on Credit Values

The time element in a credit ordinarily gives rise to discount when the credit is exchanged against money. If a promissory note does not mature till 30 days hence, the holder cannot hope to find in the business world a purchaser who will pay down at once its face value for it, since such a purchaser would be deprived of the use of the purchase price for 30 days; for this reason a purchaser would deduct the interest in advance and pay the proceeds. In practice this is calculated either as true or as bank discount, depending upon the purchaser. Long-term instruments, such as bonds, are invariably valued by true discount.

The time element, however, is ordinarily ignored in case of credit instruments payable upon demand and about which there is no doubt as to the willingness and ability of the debtor to pay. Promises of the government to pay on demand, and similar promises of reputable banks, are accepted without discount because these promises will themselves function as a medium of exchange, and the person who accepts them in exchange for a credit instrument, goods, or services will not lose the use of the funds during the time until the promissory notes can be redeemed. These promises can be used immediately and without discrimination or discount. They circulate as money themselves. To give such demand instruments is one method of paying, whereas to give a time instrument that is subject to discount is not, in common parlance, "paying"; one does not pay by giving his note. The commonest forms of demand instruments that circulate *as money*, and *are money*, are government notes and bank notes, and also bank deposits but for their limited acceptability attain to the rôle of money.

Other Kinds of Credit

Another form of credit is commonly called "personal," or "consumptive," credit, on the theory that such credits "spend themselves in the consumption or annihilation of necessities and articles of luxury as opposed to those utilities of credit which as-

sume a productive or distributive character." This kind of credit was the earliest historically, and gave birth to our credit system by educating men in the honest keeping of contracts; but personal credit constitutes a relatively small fraction of present-day credits and is discouraged by credit-givers.

Still another form of credit may be specified in this classification on the basis of uses to which the funds are devoted. It is "public" credit. The debtor is the body politic, and the funds raised are diverted to the uses of the state. Such credits are usually long term and, being strictly financial credits, partake of the qualities of the bonded debt of corporations.

Relation of Credits to Wealth

The credit instruments are many and, to facilitate their various uses, are highly specialized. Book credits, promissory notes, bills of exchange, drafts, acceptances, certificates of indebtedness, checks, bank notes, bonds, and the like all arise from credit transactions, however much the instruments themselves may differ in their details of form and terms, in their power to circulate, and in their creation by debtor or creditor. They purport to be claims for money, are evidences of debt of the debtor and of credit by the creditor, and are used to facilitate the exchange of goods and the investment of funds.

The issue of credit does not, however, by itself directly increase the wealth of the community. If Brown gives Jones a promissory note the volume of credit in the community has been increased by that amount, but the volume of wealth has not been affected one iota by that act. The deferment of the payment may, however, leave the capital in Brown's hands, and Brown may be a more efficient producer of wealth than Jones; the net result of the credit transaction for the community will thus indirectly be an increase of wealth.

The presumption is that the borrower is a more efficient producer than the lender, else the lender would use the capital in his

own productive activities. One of the greatest functions of credit is just this—it throws control of productive capital into the hands of the most efficient producers, and this control results in additional consumable commodities for the community. One of the commonest of errors is to fail to keep in mind the fundamental fact that credits are not wealth, but at best claims to wealth, and that their issue does not add directly to the wealth of the community. The issue, for instance, of multiplied millions of dollars of credits by the government does not increase our national wealth directly, however prone the owner of a dollar bill is to regard it as part of his wealth.

Fundamental Basis of Credit

A credit rests upon the person or wealth of the debtor; even when apparently based upon credits the ultimate basis is concrete wealth. For instance, a mortgage company may pledge mortgages and mortgage notes as security for debenture bonds issued by them and sold to the public; the holder of such a debenture bond may pledge it with his bank to secure an advance to his account; then the holder of a check drawn by this bank customer has a credit instrument which, in its ultimate analysis, is a property right in the mortgaged land.

This illustration shows how very useful credit is in making fixed wealth rapidly transferable and marketable so that it may be diverted to that operator who can make best use of it. The land remains intact and the operator is able, by the issue of credit based upon it, to procure seed, machinery, fertilizer, and the like, with which to work the land. Persons in other parts of the country who have funds—titles of purchasing power—are willing to exchange these funds for credits based upon land

Relation of Credits to Interest

It is human nature to prefer present economic goods or services to future economic goods or services, the degree of prefer-

ence varying with the person—with his personal characteristics and the nature of his income. If Brown is less impatient for income than Jones, he will lend to the latter, but if more impatient, he will borrow; borrowing tends to lower the impatience of the borrower and raise it for the lender. Given a market of borrowers and lenders there will result a market rate about which borrowing and lending will crystallize. This rate measures the general notion as to how much, in a certain community at a certain time, present goods are preferred to future goods; it denotes, in other words, that lenders are willing to lend $100 today for $105 repaid one year later; the premium, 5 per cent, is our market rate of interest. Whenever a credit is drawn, this element of time preference enters, and the value of the goods or the money returned at maturity must exceed the value of the goods or money originally paid. A borrower is willing to pay this premium for the use of goods, or for money which represents goods, for various reasons, but in any case the borrower must be satisfied that the goods are worth more to him (at the market rate of interest) than to the lender. One of these reasons would be that he feels himself by the amount of the interest a more efficient producer than the lender.

Credits as Circulating Media

In its function of facilitating exchange, credit may become the actual medium. An earnest of this was seen in the treatment of subsidiary, fiduciary, or token, coins. A credit medium is more economical than a metallic medium. The expenditure of labor and capital in producing metals for monetary use is a big item of expense for society. Moreover, these metals have industrial uses —and the erection of a superstructure of credit on a reserve of metallic money conserves the metal for use in the arts. Since the creation of a credit currency is done with less effort than that of a metallic currency, there is an economic advantage in substituting credit for metallic media wherever possible. Such substitution, though not without danger, is within limits highly beneficial.

Any medium circulates for one or more fundamental reasons. Certain counters may circulate by express or implicit agreement among a limited group, as gamblers' poker chips. It has been shown that commodity money attains and maintains this function because of a belief in the stability and the persistence of social custom. Credit rests upon confidence in the issuer. The issuer may be a government, a corporation, a firm, or an individual; in any case the credit issued will have a more or less extensive circulation, dependent upon the public's opinion of the ability and willingness of the issuer to meet his promises. Credit may be classified, therefore, on the basis of whether or not it has general acceptability. Those forms of credit which do possess general acceptability perform all the functions of money, and usually more efficiently than money.

Media which have only a restricted circulation are:

1. Securities (stocks and bonds). These are usually too highly specialized, too technical, too dependent upon market conditions, and too large in denomination to acquire a general circulation. They are, however, quite commonly used in making large payments at great distances, as overseas. Where the expense of shipping gold runs high, securities of international reputation may be used to settle credit balances.
2. Credit instruments, like checks, drafts, promissory notes, acceptances, and the like, which have only a local circulation among a limited circle who know the issuer, drawee, drawer, or acceptor.

Credit media which have a general circulation are:

1. Government issues:
   (a) Convertible metallic money, as nickels and coppers.
   (b) Certificates of deposit of metallic money.
   (c) Convertible paper money.
   (d) Inconvertible paper money.

2. Bank issues:[1]
   (a) Deposits, represented by checks.
   (b) Bank notes.

[1] The relative degree to which deposits and bank notes enjoy a general circulation will be treated in Chapter V.

CHAPTER IV

GOVERNMENT PAPER OR CREDIT MONEY

Wide Acceptability of Government Credit

From the creditor's point of view, credit represents the trust he has in the debtor; from the debtor's point of view, credit is borrowing power, the power he has to induce the creditor to put economic goods at his disposal for a period of time, on the promise of repayment at maturity. The power of the borrower coincides in all respects with the trust of the creditor, the one being but an opposite aspect of the other.

A government enjoys higher borrowing power than other borrowers. The war loans of 1914–1919, towering into scores of billions, exceeded all previous credit operations. Such credits indeed were quite beyond the estimates of the most sanguine financier before 1914; the way the people of the belligerent countries have loaned to their governments is amazing. Nevertheless there are limits to a government's credit, however elastic they may seem under the spur of patriotism, efficient publicity, and appeal, and practically every existing government has at some time experienced a want of unhesitating financial support.

The emphasis here is on the breadth of government credit. People visualize the state only dimly and consequently are prone to feel it is quite omnipotent. Since it draws its powers from the people and is held to be as just as their ideals, it is believed to be not only able but also willing to keep its promises. It takes a catastrophe to shake this confidence. Credit instruments of the state, in small round denominations and payable on demand, are, because of this high confidence in the government, most likely to be freely accepted by any citizen of the country and to pass readily from person to person at par, rousing scarcely a thought of

having them redeemed in metallic money. One man buys goods from another, but instead of paying standard money, or giving his note, or having the debt charged on a book account, may pay with a note issued by the government, which note has come into his hands by some previous business transaction. That is to say, the first man was for a time the creditor of his government and now the second man becomes creditor. This ready shift in the ownership of a government note and in the personnel of the creditor constitutes its circulation. So long as the government note circulates freely it performs all the functions of money and is popularly and rightly understood to be money.

Classification of Government Credit Money

Government paper money is of three sorts, the classification being based on the proportionate reserve of standard money which the Treasury keeps on hand to redeem credit money, and to instil into the people's mind the government's intent and ability to redeem on demand. The longer the credit money stays in circulation, that is, the fewer the presentations for redemptions, the smaller may this reserve be; but the very size of this reserve may be a deciding factor in delaying such presentations.

Certificates. The first class of government paper has full face value in standard money in reserve. The silver dollar by reason of its size and weight is awkward and burdensome for commercial uses; except in limited areas of the country which have become thoroughly habituated to its use, it will not circulate, but drifts at once to bank reserves and the government Treasury. Nor is its circulation desirable, for the losses from erosion are heavy. A simple device used by the government to obviate these difficulties is to give to any depositor of silver dollars or silver bullion certificates of deposit certifying that the government holds on hand face value of silver which is payable upon demand.

As only a few of the certificates will be presented for re-

demption, it is not necessary that much of the silver be coined.

Certificates are really warehouse receipts and, like any receipt of this kind, their value takes into consideration the character of the warehouseman and his warehouse. Because the government and the Treasury stand in such high esteem, currency certificates are accepted generally and without equivocation, but that this form of paper money does not add to the total of existing currency is nevertheless evident.

Convertible Paper. The second class of paper money has a fraction of its face value held in reserve in standard money, to meet demands for redemption. It is spoken of as "convertible," that is, the Treasury stands ready to redeem it at any time. As long as this convertible money is faithfully and freely redeemed, the promises are worth their face value; any distrust, however, results in a run on the Treasury, which, if great and long continued, may exhaust the reserve fund. The government may also suffer reverses in revenue receipts, or expenditures may be extraordinary, and its ability to carry on conversion may be impaired. While a reserve of 100 per cent is at no time necessary, since there is no probability of a simultaneous demand on the part of all holders, it is nevertheless expedient to keep a considerable reserve; one of the best evidences of the intention and ability of the government to fulfil its promises to redeem is the creation and maintenance of a special fund for this purpose. The fund should be separate from the general funds of the Treasury and be used exclusively for redemption purposes; the size of the fund must vary with the probability of the demand for conversion, which must be determined from experience and from the contingencies of the government credit.

It is also important to note that ultimate redeemability is not equivalent to immediate convertibility. If the paper is immediately convertible it stays at par, but if redeemable only after a period of indefinite length it will be regarded as an investment or

as a deferred payment, and its present value will differ from its face value by discount for interest and risk. In this case it does not matter whether the issuing government is rich in natural resources; it is the present means of payment that maintains the parity.

The reserve held may be determined in several ways, such as the following: It may be a minimum percentage required, the issue and the reserve bearing a predetermined minimum ratio; or it may be a certain fixed minimum quantity of specie whose ratio to the issue would vary inversely with the amount of issue; or the reserve may consist of securities and gold, the law fixing the maximum amount of the "uncovered" issue (the notes backed by the pledged securities) and requiring the excess above that amount to be "covered" by 100 per cent of gold.

Inconvertible Paper. The third class of government paper money is variously called "fiat" money, "political" money, and "inconvertible" paper money. This kind usually results from excessive issues of convertible paper money so large that the citizens doubt the government's ability or intention to redeem on demand, a doubt which is later justified by an actual suspension of specie payments. These inconvertible bills are promises of the government to pay on demand, though at the time of issue the government may have no intention of keeping its promise. Sometimes they are issued as orders on the Treasury to pay upon demand, the government well knowing the Treasury's inability to meet such demands; and sometimes they are simply printed statements proclaiming the bills to be the equivalent of such and such amounts of metallic money.

Value of Inconvertible Money

To give acceptability to inconvertible paper, the government usually makes special provisions. One is to declare it legal tender in payment of private and public dues. Unless the people unite to boycott the use of inconvertible money, the government's legal

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sanction can force its receipt at par for debts, with the result that its acceptability for other purposes will follow. Of course, the existence of inconvertible money does not prevent a creditor from contracting in terms of gold, nor does it prevent his asking a higher sum in payment, if the contract be drawn in terms of general money. Its depreciation may, therefore, persist despite legal-tender laws.

The extent to which the paper declared is legal tender may, however, be limited to the payment of taxes and debts to the government. If issued in anticipation of taxes soon to be levied and in amounts equal to those taxes, it will likely keep at par, for the people accepting it will really be paying their taxes in advance, and when the taxes come due they will not care whether they pay in standard or in inconvertible money. Such issues will not be excessive; the tax levy will act as governor of the issue, and loss of faith in the issue is, therefore, unlikely. If, however, issues exceed taxes, laid or to be laid, the volume of circulation will be inflated by the excess.

The above methods of promoting acceptability and maintaining parity are unavailing if the issues become excessive. The volume issued may be so large as to discredit the government's ability or intention to redeem, and far exceed its capacity to absorb by way of taxes. Depreciation then becomes inevitable. After the public has become used to convertible paper a certain volume that is inconvertible will by force of habit circulate without question. If the issue thereafter is limited to the growing needs of business at the existing price level, there will be no depreciation; greater issues, however, will result in depreciated values in terms of gold inversely proportional to the volume. The most effectual method of maintaining the value of inconvertible money is, therefore, to limit its issue. There is no way of determining in advance the amount which a country may issue and keep at par; the risk is psychological, varying with the people, time, and conditions. In times of peace, normal order, and ready collection of

taxes, a much larger sum of credit can be supported than in times of panic, war, or falling tax receipts.

Danger of Overissue of Government Paper Money

The danger or likelihood of overissue is the greatest objection to government paper money. Overissue brings about inflation, rising prices, bigger profits, business boom, and a demand for more and more issues; the cycle once begun is intoxicating and in democracies the legislatures are likely to yield to the popular clamor for new issues. Every issue, however, means an inflation of prices, a scaling of debts and contracts. The train of attendant evils is dire, and ultimate catastrophe is inevitable. Credit thus defeats itself. Moreover, a paper money party invariably arises which preaches the doctrine that paper money, being cheap and easily created and performing the functions of money satisfactorily, is the best kind of money, and a better means of finance indeed than taxes—which directly affect pocketbooks—or than bond sales—which must later be repaid with interest. Paper issues work out their results so insidiously and indirectly through inflation that for a time only their virtues are perceived, while their evils work unhindered.

The issuing government is not without guides to determine when an issue is excessive. One indication is a premium on gold; paper will be accepted only at a discount, the premium varying with the issues and with the government credit. Since foreign payments must be settled in gold, foreign exchange rates in a paper money country will rise and fall as the price of gold in terms of paper fluctuates. Metallic money, first the standard money and then subsidiary forms, will be withdrawn from circulation and go into hiding, into the melting pot, or abroad. Prices payable in paper will rise largely and rapidly, but a holder of specie can really buy on approximately the old basis by exchanging his gold for paper and buying at the paper prices. The premium on gold is thus a rough index to the appreciation of prices of goods.

Advantages and Disadvantages of Paper Money

The advantages of the issue of government paper money are:

1. It is economical, since it substitutes a less expensive material than metal for money and conserves the metal for the arts.

2. It is easily and quickly increased; the printing press is more expeditious than the mine, smelter, and mint.

3. It has fiscal advantages; in emergencies, before taxes can be laid or bonds sold, paper money may be run off in anticipation of taxes or receipts from sales of bonds; it can be used to pay the obligations of the state, and amounts to a forced loan without interest.

4. It is more convenient than metallic money; it is light in weight and the weight does not increase with the amount; it is easy to conceal and to ship by mail or express.

5. If properly issued, it provides a certain elasticity to the currency.

Paper money has also many disadvantages and attendant evils:

1. The greatest has been pointed out—the high probability of overissue, with consequent disturbance of contracts, business morale and relationships, and foreign exchanges.

2. The government may also suffer; it is a heavy purchaser, especially at such times as free resort is likely to be made to inconvertible issues, and it pays, like individuals, the higher prices due to inflation; the government expenditures are increased and the purchasing power of its receipts decreased, and as a net result the public debt is expanded.

3. The area of circulation of paper money is very limited; gold will be accepted internationally but paper only in the country issuing it; it cannot be used in international settlements. Its value, therefore, depends on the accidents of a limited area, and is more subject to fluctuation than that of gold, which is steadied by the equalizing tendencies of parts of a broad area.

4. Paper money has less stability of value, also, for the reason that it has only one use, namely, its monetary use. The metals, on the other hand have an equal or greater use in the arts, for

which the demand is relatively constant, inasmuch as social usages change slowly and the demand for silver or gold utensils shifts but little. The total demand for the metal is, therefore, on a wider basis than the demand for paper money, and its value is thereby stabilized.

Government Paper Money Issued by the United States

The issues of paper money of the United States government now current for which the government is direct debtor embrace the United States notes, the treasury notes of 1890, the gold and silver certificates, the gold order certificates, and the federal reserve notes. Our history is replete with experiments in government money. The colonies issued such money to finance wars or the ordinary expenses of government, and to make loans to individuals. The various colonial issues differed in the degrees to which they were made legal tender and bore interest; but over-issue characterized practically every lot. During the Revolution the "continentals" were used to finance the war, and excessive issues so depreciated their value that they became worthless. In the period 1812–1815 successive issues of legal tenders were made, with the result that specie payments were suspended and gold commanded a premium. Later issues were made during the distress following the panic of 1837, which extended over the years 1837–1842, and in connection with the financing of the Mexican War, and again after the panic of 1857. These issues were in moderate amounts and were not objectionable. During the Civil War, however, the real disaster came with the issue of United States notes, popularly called "legal tenders," or "greenbacks." The Confederacy also, as well as many of the Confederate States, issued overwhelming quantities of notes.

Greenbacks

The greenback issues were started in 1861 and continued throughout the war. The government suspended specie payments

in 1862 and the greenbacks depreciated until, in 1864, they brought less than 40 cents on the dollar in gold. The fluctuations in value were wide and frequent, varying with the fortunes of war and the markets.

Contraction was undertaken at the conclusion of the war, but abandoned in 1868. In 1879 specie payments, according to the pledge of the Specie Resumption Act of 1875, were resumed, the Secretary of the Treasury having accumulated a specie reserve of about $100,000,000 for this purpose. The sum of greenbacks left in circulation was $346,681,016, and it became the accepted idea that the government would retain a reserve of $100,000,000 in gold for their redemption. This reserve proved sufficient until the redemptions during the depression that followed the panic of 1893, when an endless chain of redemptions and reissues threatened to extinguish the reserve; the balance of trade was adverse and holders of greenbacks presented them for gold to ship abroad, but because of deficits the Treasury was forced to reissue the redeemed notes to meet its ordinary expenses. To replenish the reserve, the Treasury sold bonds for gold.

In 1900 a separate reserve fund of $150,000,000 was authorized and adequate powers were extended to the Secretary of the Treasury for maintaining it; the fund was to be separated from the general Treasury funds; the greenbacks when redeemed were not to be reissued until the fund was again replete; the Treasury was to pay any gold in its possession into this fund to refill it, and was also empowered to sell bonds to fill the reserve when it should drop below $100,000,000. By the Federal Reserve Act in 1913 the government's share of the net earnings of the federal reserve banks may, at the discretion of the Secretary of the Treasury, be used to supplement the $150,000,000 reserve.

These greenbacks are promises of the United States to pay on demand. Between 1862 and 1879 this promise was not kept and the notes possessed all the features of inconvertible paper; but since 1879 they have been convertible and at par. They are now

legal tender for payment of all debts, public and private, except for payment of interest on government debt and for payment of revenue duties. The denominations issued are 1,000's, 500's, 100's, 50's, 20's, 10's, 5's, 2's, and 1's. As a constituent of our money system they are a menace, are an inelastic form of currency, and should be redeemed and discarded. Their menace becomes less as they come to constitute a smaller fraction of our total circulating media, as they become bills of smaller denominations, and as the reserve becomes larger—all of which tendencies are now at work.

Treasury Notes of 1890

The treasury notes of 1890 are similar to the greenbacks in quality. They were issued under the Sherman Silver Law of that year to pay for the silver bought by the government. They created an additional demand upon the gold reserve against the greenbacks, which was already too small. The issues are:

ISSUE AND RETIREMENT OF TREASURY NOTES

(In millions)

Fiscal Year	Treasury Notes Issued	Silver Dollars Coined from Bullion of Act of 1890	Amount of Treasury Notes Redeemed in Silver and Canceled	Amount of Treasury Notes Outstanding
1891	$ 50.5	$27.3	....	$ 50.2
1892	51.1	3.4	....	101.7
1893	45.5	5.3	....	147.2
1894	8.7	.0	$ 3.3	152.6
1895	.....	3.9	6.5	146.0
1896	.....	7.5	16.4	129.7
1897	.....	21.2	14.8	114.9
1898*	.....	3.8	8.5	106.3
Total...	$155.9	$72.6	$49.6	.....

* First 6 months only.

The Act of 1900 provided for the retirement of an amount equal to the amount of silver coined from that bought with the notes; this has now all been coined and as the notes are turned in for redemption, silver certificates are substituted for them. Of the $155.9 millions originally issued, only $1.7 millions were outstanding September 1, 1919; there are probably very few in existence, and most of these will be held as souvenirs and in numismatic collections. They are redeemable on demand in either gold or silver, at the discretion of the Secretary of the Treasury.

Gold and Silver Certificates

The United States has two forms of representative paper money, the gold certificate (or note) and the silver certificate. In 1863 Congress authorized the issue of gold notes against deposits of gold coin and bullion. They are receipts for the gold coin and redeemable in gold. They were not legal tender until 1920, but have been receivable for customs, taxes, and all public dues, and previous to July 15, 1916, might be used as reserves in national banks. The denominations issued are 10,000's, 5,000's, 1,000's, 500's, 100's, 50's, 20's, and 10's. The gold held to redeem these notes may be coined or uncoined; by an Act of 1916 two-thirds may be kept in bullion form.

The silver certificates were authorized by Congress in 1878, to facilitate the circulation of the standard silver dollar. They are redeemable in silver only and are not legal tender, but are receivable for all public debts, customs, and taxes. By the Act of 1878 the denominations issued were 1,000's, 500's, 100's, 50's, 20's, 10's, 2's, and 1's. In 1891 an act was passed limiting the denominations to $10 and under, except that one-tenth of the total issue might, in the discretion of the United States Treasurer, be issued in denominations of 20's, 50's, and 100's. The large notes, when redeemed by the Treasurer, are retired and canceled, and certificates of the denominations of 10's or less substituted. The

Pittman Act of 1918 made provision for the reduction of silver dollars to bullion for shipment to India. This forced the retirement of silver certificates representing the silver dollars. The federal reserve banks issued a request to the member banks to forward at their expense all silver certificates above $5 denomination and to receive in their place federal reserve bank notes; a little later smaller denomination certificates were called in and federal reserve bank notes given in exchange. This process ended in 1919, as the emergency of the war passed. These federal reserve bank notes are being replaced by silver certificates as silver is purchased by the government to replenish its stock.

Gold Order Certificates

One other form of government certificate is the gold order certificate, issued at the discretion of the Treasurer of the United States, against deposits of gold coin or gold bearer notes, of ten-thousand denomination only. Prior to July 1, 1914, the subtreasury in New York issued this form of certificate to the order of the New York Clearing House in settlement of its debit balances. Such certificates were formerly carried by the national banks as part of their reserve.

Federal Reserve Notes

The federal reserve notes are obligations of the United States government and are, strictly speaking, a form of government paper money, but their qualities and the method of issue can be more easily treated in Volume II, Chapter XIX.

Method of Issuance

The United States Treasury has Divisions of Issue and Redemption, to which are assigned respectively the accounts relating to the issue and redemption of United States notes, gold certificates, silver certificates, and currency certificates. The federal reserve notes, the federal reserve bank notes, and the national

bank notes, against which redemption funds are specifically kept, are issued and redeemed through the Comptroller of the Currency. The reserve fund for redemption of United States notes and treasury notes, the gold coin and bullion held against outstanding gold certificates, and the silver dollars and bullion held against outstanding silver certificates, are held as separate trust funds for the redemption of the notes or certificates for which they are respectively pledged, and can be used for no other purpose.

New United States notes are issued upon request in return for United States notes unfit for circulation, also for federal reserve notes, federal reserve bank notes, national bank notes, subsidiary silver coin, or minor coin, received for redemption or exchange. Gold certificates are issued by the Treasurer upon deposit of gold coin and silver certificates upon deposit of standard silver dollars.

Method of Redemption

United States notes and gold certificates are redeemable by the Treasurer in gold coin, treasury notes of 1890 in gold coin or silver dollars, and silver certificates in silver dollars. National bank notes and federal reserve bank notes are redeemable in lawful money by the Treasurer, and also over the counter of the issuing bank. Federal reserve notes are redeemable in gold by the Treasurer.

Since the abolition of the subtreasuries in 1920–1921, the federal reserve banks have redeemed United States currency, national bank notes, federal reserve bank notes, and coin for non-member banks, business concerns, and individuals. It is not necessary to effect such redemptions for the member banks inasmuch as they may forward paper money or coin, whether fit or unfit for circulation, to the federal reserve bank for credit to their reserve account, and they may order paper money or coin fit for circulation from this bank as needed.

All United States notes, treasury notes, and gold and silver

certificates unfit for circulation, when not mutilated to a greater extent than two-fifths of the whole, are redeemed by the government at their full face value. All notes mutilated so that less than three-fifths, but clearly more than two-fifths, remain, are redeemed by the Treasurer at Washington at one-half the face value of the whole note. Fragments less than three-fifths may be redeemed at full face value if accompanied by an affidavit of the owner that the missing portions have been totally destroyed; this affidavit must state the cause and manner of the mutilation and must be sworn to by a notary.

When remittances are received for redemption by the Treasury from a place in which there is no federal reserve bank or branch bank, returns are made in new United States notes, subsidiary silver, or minor coin, by mail (postage and insurance deducted) unless requested otherwise, in which case the charges for transportation are paid by the consignee. If the remittances are received from a place in which there is a federal reserve bank or branch bank, the Treasurer may make returns by check payable at the federal reserve bank or branch bank, if it suits his convenience.

Paper currency for redemption must be assorted by kinds and denominations, and each 100 notes or less enclosed in a paper strap marked with the amount. The Treasury gives other instructions in case of large packages. With each package should be enclosed a memorandum giving an inventory of the contents, the sender's name and address, and the disposition to be made of the proceeds. United States notes, treasury notes of 1890, gold certificates, and silver certificates may be sent in the same package and should be marked "Unfit United States currency for redemption." National bank notes, federal reserve notes, and federal reserve bank notes may be sent in the same package, marked "National and federal reserve currency for redemption." Charges are paid by the government on unfit national bank notes, federal reserve notes, and federal reserve bank notes, when sent to

the department at Washington "charges collect," but not on any other kind of currency.

The total redemptions during the fiscal year 1919 were:

United States currency	$731.4 millions
Federal reserve notes	877.3 "
Federal reserve bank notes	31.8 "
National bank notes	294.2 "

Money Circulating in the United States

The total money in circulation in the United States on June 30 in recent years is shown in the following table:

MONEY IN CIRCULATION IN THE UNITED STATES, JUNE 30

(In millions)

	1914	1915	1916	1917	1918	1919	1920
Gold coin	$ 611	$ 590	$ 637	$1,036	$1,114	$1,172	$ 834
Gold certificates	1,026	1,072	1,413	1,392	818	542	390
Standard silver dollars	70	64	66	71	77	81	134
Silver certificates	478	481	489	477	379	169	118
Subsidiary silver	159	159	171	193	216	232	251
United States notes	337	332	341	335	340	332	337
Notes of 1890	2	2	2	1	1	1	1
Total	$2,683	$2,700	$3,119	$3,505	$2,945	$2,529	$2,066
Federal reserve notes	....	$ 80	$ 173	$ 544	$1,713	$2,493	$3,122
Federal reserve bank notes	....	....	....	12	15	163	199
National bank notes	$ 715	785	728	698	703	649	696
Total	$ 715	$ 865	$ 901	$1,254	$2,531	$3,305	$4,018
Grand Total Circulation	$3,398	$3,565	$4,020	$4,759	$5,476	$5,841	$6,084
Per Capita Circulation	$34.35	$35.44	$39.28	$45.74	$50.81	$54.28	$56.79

The decrease in the silver certificates and the increase in the federal reserve bank notes are explained by the operations of the Pittman Act described above. The increase in gold coin and bullion is due to the heavy importations from abroad during the war,

Paper Currency of Each Denomination Outstanding on June 30

(In thousands)

Denominations	United States Notes		Treasury Notes of 1890		Federal Reserve Notes		Federal Reserve Bank Notes	
	1918*	1920†	1918*	1920†	1918*	1920†	1918*	1920†
1's	$ 37,134	$141,359	$ 331	$ 321	.....	.....	.....	$132,141
2's	35,009	50,279	207	200	.....	.....	.....	33,976
5's	202,187	118,436	456	416	$ 274,094	$ 484,639	$ 6,776	28,899
10's	49,092	21,071	484	404	612,456	935,827	5,091	4,367
20's	10,410	5,769	218	177	584,168	1,283,628	3,716	3,540
50's	1,227	999	9	8	224,320	287,227	.....	200
100's	2,002	1,586	88	73	152,540	257,515	.....	.....
500's	1,509	1,146	63	.....	.....	31,116	.....	.....
1,000's	9,097	7,023	.....	56	.....	105,653	.....	.....
5,000's	.....	.....	.....	.....	.....	6,780	.....	.....
10,000's	.....	10	.....	.....	.....	13,490	.....	.....
Total outstanding	$347,681	$347,681	$1,858	$1,659	$1,847,580	$3,405,877	$15,585	$203,125
Less:								
Unknown and destroyed	1,000	1,000	.....	.....	.....	.....	.....	.....
Held in Treasury	6,744	9,381	6	2	29,982	27,698	100	2,490
Held by federal reserve banks	.....	.....	.....	.....	106,186	256,176	.....	.....
Held by federal reserve agents	.....	.....	.....	.....	.....	.....	.....	.....
Redeemed but not assorted by denominations	.....	.....	.....	.....	.....	.....	141	1,900
Net circulation	$339,936	$337,299	$1,851	$1,656	$1,711,411	$3,122,001	$15,343	$198,735

* These data are taken from the United States Treasury Annual Report on Finances, 1918, pp. 564–567;
† Data taken from monthly statement issued from the Treasurer's Office, the Treasury Department.
‡ Includes $59,671 fractional parts of national bank notes.

Paper Currency of Each Denomination Outstanding on June 30 (*Continued*)

(In thousands)

Denominations	National Bank Notes		Gold Certificates		Silver Certificates		Total	
	1918*	1920†	1918*	1920†	1918*	1920†	1918*	1920†
1's	$ 342	$ 342	.....	.....	$218,713	$ 60,745	$ 256,521	$ 334,910
2's	163	163	.....	.....	50,731	16,267	86,111	100,886
5's	115,186	126,163	.....	.....	105,693	32,143	704,696	790,699
10's	295,646	297,747	$ 334,178	$ 196,631	13,001	5,240	1,307,951	1,461,291
20's	248,931	239,557	246,290	167,098	13,468	5,783	1,107,203	1,795,555
50's	80,250	30,406	73,160	56,089	7,307	3,795	336,274	378,726
100's	34,661	31,445	103,354	80,031	266	236	202,013	370,888
500's	88	88	27,313	18,195	15	13	28,926	50,555
1,000's	21	21	131,823	109,285	16	15	141,020	222,053
5,000's	.....	.....	142,650	141,960	.....	.....	142,650	148,740
10,000's	.....	.....	725,710	606,370	.....	.....	725,710	619,870
Total outstanding	$725,647	$725,993‡	$1,784,480	$1,375,659	$409,215	$124,240	$5,132,048	$6,184,236‡
Less:								
Unknown and destroyed	.....	.....	.....	.....	.....	.....	1,000	1,000
Held in Treasury	20,068	22,691	747,970	701,078	27,408	5,718	832,281	859,062
Held by federal reserve banks	.....	.....	.....	.....	.....	.....	106,186	256,176
Held by federal reserve agents	.....	.....	208,278	194,058	.....	.....	208,278	194,058
Redeemed but not assorted by denominations	1,442	6,956	.....	.....	.....	.....	1,583	8,856
Net circulation	$704,137	$696,345	$828,231	$480,522	$381,806	$118,521	$3,982,718	$4,865, 83

* These data are taken from the United States Treasury Annual Report on Finances, 1918, pp. 564–567.
† Data taken from monthly statement issued from the Treasurer's Office, the Treasury Department.
‡ Includes $59,671 fractional parts of national bank notes.

to the production of the mines, and to the reduction of plate and the like. The reason for the decrease in the gold certificates and the increase in the federal reserve notes will be explained in Volume II, Chapter XII. The increase in subsidiary silver current is explained by the greater population, the higher price level, and the fractional prices charged for various services and goods. Certain changes in marketing methods, such as the use of slot automatic machines, also occasion greater need for small change; in prosperous times more people have money on their persons, particularly small coins. The decrease in notes of 1890 has been explained. It is evident from the table that the money in circulation is fast becoming the various forms of bank notes.

The paper currency of each denomination outstanding on June 30 and its location, as well as other statistical data, are given in the preceding table.

CHAPTER V

NATURE OF BANK CREDIT

Specialization in Credit Issue

The credits issued by the government are incidental to its major functions of making, executing, and interpreting the law. The credits issued by the business man are incidental to the conduct of his commercial operations. The personal credits issued are occasional and for personal consumptive uses. None of these parties specializes in the issue of credits or devotes time primarily to that function. The commercial banks have undertaken this specialized function. Their business is the issue and guaranty of credits for business uses; they are dealers in credits, and are sometimes, although too narrowly, called "manufacturies" of credit. As will appear in the later chapters on banking practices, commercial banks function in many ways which do not bear strictly upon credits, and which concern financial as well as commercial credits. The fundamentals of banking, however, are most easily grasped from the point of view of purely commercial credit operations.

Forms of Bank Credit

The liabilities of a bank to creditors take four chief forms:

1. Deposits
2. Bank notes
3. Acceptances and letters of credit
4. Bills payable

Deposits are rights to draw on the bank for money. A depositor commonly gets such rights in one or more of the following possible ways:

1. By the deposit of cash or cash items.
2. By depositing time items for collection and credit.
3. By remitting securities or other property to the bank for sale and credit.
4. By the process of loan and discount.
5. By the sale of securities, real estate, personalty, or services to the bank for credit.

Bank notes are promises of the bank to pay money on demand; issued in round denominations and transferable without indorsement, they are designed to circulate in lieu of metallic money. The transferee becomes the noteholder and creditor of the bank; the bank note may come into his hands in the ordinary transactions of his business, or through any one of the five methods described above by which a depositor gets deposits.

Acceptances are bills of exchange drawn on the bank, which, for a commission, it obligates itself to pay, but to provide funds for which payment the person for whom the letter of credit is procured is obligated to the bank. Letters of credit are agreements by the bank to accept, and to pay at maturity or demand, bills of exchange drawn under certain specified conditions.

Bills payable are promissory notes, secured or unsecured, interest-bearing, and running for a period of time, by which a bank borrows in large, irregular sums, at various times.

Sometimes the borrowing is done by selling some of the bills receivable, acceptances, or other commercial paper which the bank has in its portfolio, a process which incurs the contingent liability of indorsement or agreement to repurchase.

Bank credit extensions more commonly take the forms of deposits and bank notes, and therefore the theory of these two forms will be fully developed.

Nature of Cash Deposits

Suppose a person, Mr. White, from motives of hire, public interest, or business efficiency, undertakes to accept moneys from

a certain number of persons, Messrs. Black, Brown, Green, and Blue, who have mutual business transactions, to act as trustee and common custodian of the funds, to keep a record of receipts and withdrawals, and to permit and care for the transfer of title to these funds on his books. The transfer of title to these funds would become the common method of payment in their business transactions. Such transfers would be accomplished most easily by Black ordering White to debit his account a certain number of dollars and to credit Brown's account the same number of dollars; other orders might be written by Green on White in favor of Black, and by Blue on White in favor of Brown, and so forth. If a number of such orders were presented to White, all the payments could be handled by the simple cancellation of debits and credits on his books. Trade would be much convenienced.

Instead of White acting in the capacity of trustee, the traders, Black, Brown, Green, and Blue, might be content to loan White the funds on his promise to repay the loaner, or the person presenting the loaner's written order, on demand; title to the funds would then pass to White, while the traders would become demand creditors of White with rights to draw on that credit at their pleasure. These rights to draw are deposits, and in this case they arise through the deposit of cash. White is essentially a bank of deposit. The orders for withdrawals are checks or drafts. White's balance sheet (supposing he had no other funds or wealth) would then stand as follows:

Assets		*Liabilities*	
Cash	$100,000	Deposits	$100,000

Items for deposit may consist of cash or cash items, "cash items" being the term applied to items payable on demand. Immediate credit would be given by White (the receiving bank) for cash, and might also be given for cash items received for collection. The receiving bank (White in this case) has usually a defi-

nite policy to which it adheres in this matter; it usually gives credit only after collection or after the average time consumed in making such collections. If interest were being paid on the deposits or if the depositor expected to draw at once against his credit, the bank would be likely to delay credit until collection had been made. Collections on institutions in the city or the vicinity would thus receive credit sooner than items on more distant institutions; clearing house items would be given immediate credit.

Motives in Depositing Cash Funds

Customers have various motives in making deposits of cash funds. One motive is the desire for safety. The depositor gives up his right to any particular cash when he makes a deposit; he cannot properly say he has "money in the bank"; he has simply the right to draw money from the bank, and it is very unlikely that he would get back the identical cash which he actually deposited. If the depositor thinks in terms of the extraordinary facilities which the bank has for the safe-keeping of its moneys and valuables, he is quite likely to err as to the exact nature of deposits. He may make a "special deposit," having the banker "earmark" it and keep it out of the general fund of the bank's cash, so that the identical money deposited can be repaid; but this would be rather a warehouse business than commercial banking, and deposits are not of this nature. The safe-keeping, therefore, when rightly understood, refers, not to the depositor's funds, but to the bank's funds. The depositor's funds are safe only in the sense that a claim against the bank is good and the facilities for safe-keeping (vaults, guards, burglar alarms, etc.) of the bank's funds add to the value of a depositor's claims.

Another motive for depositing cash funds with a bank is convenience. Payment by check is more convenient than payment by money. The use of checks saves the bother and expense of counting and of shipment; checks are relatively safe against theft and loss in transit; they are payable only to the payee or

indorsee; the voucher becomes a receipt; and large sums may be paid with the same ease as small ones.

A third motive may be the receipt of interest on the deposits. In communities where the competition for accounts is intense, banks offer interest on the average balance carried by the depositor; this is especially likely in the case of large accounts, as of the governmental units, corporations, or other banks. The interest paid ranges from 2 to 4 per cent, varying with the account and the bank. The policy of the bank may be open, explicit, and the same to all, or arrangements with the depositor may be secret. Paying interest on deposits is discouraged by bankers, for it adds to the expenses, forces the bank to negotiate loans which have high earning capacity but inadequate security, and at times, when deposits are increasing faster than loans or when the market money rates are low, eats up the bank's profits. If interest is paid, it should be done sparingly and on a sliding scale of rates which varies with the market rate, and the burden should be on time deposits.

The bank performs many services for the depositor which, because of its large clientele and organization, it is better equipped to perform than the depositor himself. It collects his cash items and other papers through its clearing house, messengers, or transit and collection departments; it keeps and cares for his securities, and upon order will buy or sell these for him; it offers free advisory service about credits, market conditions, signatures, and so forth. The exact nature of these and other services which are tendered to the depositor who maintains with the bank a fair dependable balance, will appear in the following chapters.

A more important motive than any of these is bank "accommodation," as it is called. The depositor wishes to be assured that he will have someone from whom he can get loans in case of need, and a bank which has enjoyed the use of a good balance from a worthy customer assumes an implicit responsibility to accommodate that depositor with loans when appeal is made. In this

sense the relations between customer and bank are mutual. In the depositor's daily business transactions, occasions frequently arise when he wishes to procure loans on his own note or by the discount of paper in his portfolio, and the bank stands ready to provide customers with its own credit in exchange for their credit or that of other persons. The bank offers a market for procuring and selling credits and so facilitates business in this incomparable way.

Nature of Loans

The last paragraph introduces the subject of loans and discounts. The person or bank, here termed "White," soon observes that, although payments of checks are being continually made, cash is as continually being redeposited by the payee or others; that, although payments and receipts are not synchronous or equal in amount, there is a continuous balance left in his hands, which varies but little in amount. As there is slight probability that all depositors will at one time demand the full amount of their deposits, White is therefore safe in loaning to any would-be borrowers, on their promissory notes, a sum, say, of $45,000. White's balance sheet would then stand as follows:

(1) If cash is paid out to the borrowers:

Assets		*Liabilities*	
Cash	$55,000	Deposits	$100,000
Loans (promissory notes of borrowers)	45,000		

or (2) if the borrowers preferred to leave the funds on deposit with White, subject to later withdrawal:

Assets		*Liabilities*	
Cash	$100,000	Deposits	$145,000
Loans (promissory notes of borrowers)	45,000		

In this process deposits have been created; the borrower has come to possess rights to draw money from White, although the cash which he nominally borrowed and redeposited at no time left the possession and ownership of White. From the borrower, White has accepted an interest-bearing promissory note payable at a specified date, and in exchange for this note has given the borrower the right to draw on him to the amount of the note, with the implied agreement that he will pay such requisitions on demand. The ratio of his cash to his demand liabilities has been changed from 100: 100 to 55: 100, or 100: 145. White does not normally allow interest to Black for such credits, however long it may be until Black demands payment of them; rather than allow interest on deposits created by loans, the rate of interest on the loan would be lowered. Receiving interest-bearing promissory notes in exchange for the right of the depositor to draw later is, in effect, lending with interest and borrowing without interest, by means of which White is able to make a profit, which is the motive of his business.

Nature of Discounts

It may be supposed that the loans placed by White in this way do not exhaust the sum that may be loaned by him without endangering his ability to meet all demands made upon him, and that some of his customers have promissory notes, bills of exchange, or acceptances, which have come into their hands in the daily transactions of their businesses and which they are willing to sell. White may buy these to the face amount, say, of $35,000, but he will pay less than their face value by the amount of the interest on their face value till due. This interest is taken in advance, and the proceeds are either paid in cash or credited as deposits to the parties selling the paper. The interest taken in advance and calculated, not on the sum actually paid in cash or credited as deposits (that is, the sum actually loaned) but on the face of the paper, is called "discount," and the act of selling a note

when discount is taken is called "discounting" the paper. At the time when White buys the paper the discount is not yet earned, but it is nevertheless credited at once. His balance sheet, based on the last above, will then stand:

(1) If cash is paid:

Assets		*Liabilities*	
Cash	$66,000	Deposits	$145,000
Loans (promissory notes of borrowers)	45,000	Discount	1,000
Discounts (promissory notes and other paper discounted)	35,000		

or (2) if paid by creating deposits:

Assets		*Liabilities*	
Cash	$100,000	Deposits	$179,000
Loans	45,000	Discount	1,000
Discounts	35,000		

The process of discount results in the creation of deposits, in much the same manner as did loans. White has now in his portfolio commercial papers bearing the names of makers, drawers, and indorsers—claims against these parties, these claims being earning assets, with the earnings taken in advance. In exchange for these White has given either cash or deposits. If cash is paid, the payee may possibly redeposit it. The discount is profit, since no interest is allowed on the credits which White gives the seller of the paper.

Effect of Loans and Discounts on Deposits

Under the circumstances just mentioned, White's ability to loan and discount further is decreasing; the ratio of his cash to his demand liabilities has decreased from 55: 100 (or 100:145) to 66: 145 (or 100: 179). The larger the deposits, the larger absolutely the demands that may be made for payment; hence the

cash left on hand may barely suffice to meet them. On the other hand, the larger the loans and discounts, the larger the profits. White is tempted, therefore, to make loans and discounts, husbanding his cash and creating deposits, to such an amount as will bring the greatest profits and yet be within the bounds of safety.

Crediting the proceeds of loans and discounts is the usual method of creating deposits. "Loans" is the term applied to the extension of cash or credits to a customer on his own note. The lender, White, will require interest for the time the borrower has the funds; the interest will be payable, however, not in advance but at maturity of the principal. The note is usually drawn with interest at, say, 4 per cent for the period of the loan, but it may be drawn without interest, in which case the principal of the note is made large enough to cover the amount of the actual cash or credit advanced plus interest thereon. "Discounts" is the term applied to extensions of cash or credits to persons selling notes or other commercial credit instruments, of which the makers or drawers are usually third persons, at prices less than their face value by the amount of the interest on their face value till due. The buyer, White, calculates the "discount" at his "discount rate," deducts it from the face value, and pays the seller the "proceeds" in cash, or credits them to his account. The two operations are essentially the same and result in the creation of deposits. The financial statements of banks group these two assets together as Loans and Discounts.

Discount, then, is not a distinct function of commercial banks, but one of the methods of creating deposits. The promissory note or discounted item becomes the property of the bank to which the promissor is bound to make payment at maturity; the note is listed among the assets, and at maturity the bank will receive the face amount. The volume of deposits varies directly with the amount of loans and discounts. The borrower gives his promise to pay the bank (and the seller of discount paper gives the promises of himself or third parties to pay to his indorsee, the bank)

and in exchange gets cash or the right to draw at will on the bank with the implicit promise of the bank to honor his requisitions.

Rationale of Exchange of Credits

The rationale of this exchange of credits is that the seller (or borrower) gives less widely known credit for the more widely known credit of the bank. The bank essentially guarantees the private credits, the bank credit being more widely accepted and therefore more useful to the customer in his business operations.

The exact nature of this substitution or guaranty of credits should be fully perceived, for it constitutes the fundamental principle of commercial banking. There is an exchange of less known credit for better known credit; of less useful credit for more useful credit; of credit in which the time element is considerable for credit in which the time element is inconsiderable, the check or draft on a bank being payable upon demand; of credit subject to interest and discount for credit freed from such depreciation.

To illustrate, suppose a retailer buys goods from a jobber on 30 days' time. The common methods of financing the transaction are three. The first method is for the jobber to carry the retailer on open account for 30 days. In this case the jobber will probably have to borrow at his bank funds to meet his own debts maturing meanwhile. He gives his own note, payable to the bank, and gets in exchange deposit rights which he transfers by check to his creditors. The bank in this way becomes the direct presumptive debtor to these creditors, and remains so until the checks are presented and paid. Such an operation is a substitution of credits. But the jobber was able to get this substitution only by showing to, or pledging with, the bank his account receivable, that is, the retailer's credit, the retailer's implied promise to pay in 30 days. The bank accepted the jobber's credit, supported by a contingent right to the retailer's credit, giving in return its own credit. The bank accepted credit items in which the time element was considerable and gave demand credit items.

PUBLIC LIBRARY
OF THE CITY OF
COLORADO SPRINGS

The second method is for the retailer to give to the jobber a promissory note for 30 days, or to accept (that is, sign) a draft drawn on him by the jobber by which the retailer agrees to pay in 30 days. The jobber can indorse (and thereby guarantee) this explicit promise of the retailer to pay, and can sell or pledge it with the bank for credit to his own account. The jobber can then draw checks and remit to his creditors, and the bank becomes debtor to his creditors until the checks are presented for payment. The bank looks primarily to the retailer and secondarily to the jobber for payment; for the credit of these two men it substitutes its own.

The third method is for the retailer to borrow at his bank, giving his note for 30 days, and either receive credit to his account against which he can check and pay the jobber, thereby substituting the bank as debtor to the jobber till the checks are presented; or to have the bank authorize the jobber to draw against it and agree to accept the draft drawn payable in 30 days and to pay at maturity, thereby substituting time credit of the bank for the retailer's time credit.

Limitation on Creation of Deposits of Bank in System

In an earlier paragraph it is stated that the creation of deposits by White was limited by the declining ratio of White's cash to his deposits. So far the hypothesis has been that White was the only bank in existence, or was an isolated bank, and that when customers drew checks against White and gave them to their creditors, cash to the amount of those checks was withdrawn by the latter and stayed out in circulation. If, however, these creditors are also customers of the bank, they will probably deposit the checks for credit to their own account, in which case the process of payment amounts to a transfer of deposits on the books of the bank, and, inasmuch as no cash is demanded in such cases, a smaller reserve need be held by White as the proportion of his customers to the whole population becomes larger. If all the people are White's

customers and all the payments in the community are made by checks on the bank, it will need to keep no reserve whatever, and the creation of deposits through loans will be unlimited so long as the deposits remain acceptable circulating media. Profits, too, will be limited only by the demands of borrowers for loans.

But the supposition of a sole or isolated bank is far removed from business facts. In the United States there are thousands of banks; many communities have more than one between which customers divide their patronage. A customer of bank A may hand a check to a customer of bank B, who will deposit it with B, and B will collect the cash from A. The loss of cash by A in meeting such collections over the counter, through the mails, and at the clearing house, would seriously affect the ratio of cash to deposits and endanger the ability of the bank to meet its demand liabilities. Now if one bank, by the method of loans and discounts, creates an unduly large sum of deposits, it is sure to suffer adverse clearing house balances, for, although many of the checks drawn against these accounts will be redeposited in the drawee bank by holders into whose hands they fall, many others will be deposited in other banks which will collect cash from that bank. Of course, if all other banks of the system are creating deposits at the same pace, it is possible that the checks drawn against A and deposited in banks B, C, D, and E, will just equal those drawn against B, C, or D, respectively, and deposited in A. But if any one bank creates deposits out of proportion to the others, it faces the impossibility of maintaining its cash. For the banking system as a whole the deposits may reach a high multiple of the cash reserve, but the multiple for any one bank of the system must approximate that prevailing in other banks.

If a customer of A applies to A for a loan, one of the factors determining whether it will be granted is the average daily balance of his account with A. Furthermore it is quite common for banks to insist that their borrowing customers maintain balances at or above some minimum percentage of their borrowings.

Probably 20 per cent is the commonest requirement; that is, if a loan of $100,000 is extended, the average daily balance of the borrower for the period of the loan must not be less than $20,000. From the date of the loan, the credit is checked against until it reaches some minimum amount; then a few days before maturity the borrower will probably build up his balance so that he may pay the loan. His checks drawn during the loan reach other near and distant banks, which present them to A for payment. The attendant loss of cash by A forces it to reduce or limit loans, but this acquisition of cash by bank B makes it possible for B to extend loans. Part of this cash will stay with B, but the larger part will be drawn out by bank C when C collects checks against B; in turn, C will extend loans and B will retract. By a continuation of this process the cash will be widely dispersed and become the basis for successive expansions of loans and deposits, but in smaller and smaller amounts. The sum of these deposits created by the loans process and based upon an increment of cash reserve deposited in some bank of the system may increase until the ratio of the cash to the new deposits approximates the ratio for the system as a whole. The total expansion of the system's deposits derived by the loans method is therefore determined by the cash reserve and the prevailing ratio of reserve to deposits. The deposits, however, arising out of loans by one bank in a system of otherwise homogeneous banks cannot exceed the increment of cash reserve probably by more than 25 per cent, because when such deposits are created the borrower proceeds to check out all but a minimum balance during the life of the loan and the checks may be largely presented through the clearing house or otherwise for payment. Nor can such deposits be much out of proportion to deposits derived by other banks from loans.

Illustration of Need of Common Ratio

The necessity of this common ratio as among the banks of a system may be illustrated numerically. Assume the following

data: Bank A has $100,000 cash reserve, and likewise all the other banks, B, C, D, and E, have together, $100,000 cash reserve; bank A keeps 10 per cent reserve, the other banks, B, C, D, and E, keep 20 per cent; one-fifth of the deposits of each bank is not checked out, three-fourths of the checks are redeposited in the drawee bank, and the rest are deposited in the other banks and presented through the clearing house. Then the situation will be as follows:

	Bank A	All Other Banks, B, C, D, and E		
		Each Smaller Than A	Each Equal to A	Each Larger Than A
Cash Reserve	$ 100,000	$100,000	$ 400,000	$ 800,000
Per cent Reserve	10%	20%	20%	20%
Deposits	1,000,000	500,000	2,000,000	4,000,000
Checks Drawn	800,000	400,000	1,600,000	3,200,000
Checks Redeposited in Drawee Bank	600,000	300,000	1,200,000	2,400,000
Checks on it Presented Through Clearing House	200,000	100,000	400,000	800,000

It is seen that bank A suffers an adverse clearing house balance of $200,000 less $100,000, or $100,000, which wipes out its reserve. Had it kept the same per cent reserve as the other banks its clearing house balance would have been zero. On the other hand, a more slender reserve would have resulted in suspension and failure. In fact, the above adverse balance of $100,000 is a minimum, for in all probability some of the checks on B would have been deposited in C, D, or E, and presented by them and not by A at the clearing house. If the cash reserve of B, C, D, and E combined had been assumed to be less than $100,000, the adverse balance of A would have been greater.

If, instead of supposing that bank A's cash reserve is equal to the total reserve of banks B, C, D, and E, combined, we suppose that the reserve of each bank is $100,000, then the total reserve for B, C, D, and E will be $400,000, deposits $2,000,000, and clearing house items $400,000. One-fourth of $400,000, or $100,000, of these clearing house items will be presented against, let us say, B. The banks presenting checks on B are A, C, D, and E, and, as it has been assumed that they are all the same size, one-fourth of $100,000, or $25,000, will be presented by A. By the same reasoning A will present $25,000 against each of the other banks, C, D, and E, in the group, thus presenting a total of only $100,000 to be deducted from the $200,000 which B, C, D, and E present against it. Under these assumptions it is evident that A would suffer an adverse clearing house balance of $100,000.

If instead of supposing A equal to B, C, D, and E, combined, or equal to B, C, D, and E, severally, A is assumed to be smaller than B, C, D, and E, severally, adverse balances will likewise exist. For if it is assumed that each of the banks B, C, D, and E, has, say, twice the cash reserve that A has, then the checks on B presented by A, C, D, and E, will be divided somewhat in the proportions of 1, 2, 2, and 2; and one-seventh of $800,000, or $114,285, will be less than the checks presented against A. Therefore, whether bank A is considered as smaller, equal to, or greater than the other banks, it may expect adverse clearing house balances if its ratio of reserve to deposits is more slender than that which the other banks of the system maintain.

This limitation does not apply to deposit rights arising from the deposit of cash; it applies only to those additional deposits built upon cash holdings by the method of loan and discount. For if $100,000 in cash is deposited, checks drawn later to that amount can be fully met. Any one bank can build up any amount of deposit liabilities by the cash method, and proceed to loan them all out except such a proportion as business expediency proves proper as a reserve. The adverse clearing house balances which

follow the loans will be met by the cash that has been received over the window. Accordingly bankers solicit accounts and offer various inducements to get cash deposits and build up their demand liabilities in that way, whereas they guard very carefully against overextension of demand liabilities by the loans process.

Ratio of Loans to Deposits

Because a very large proportion of deposit liabilities are created by the method of loans and discounts, and because receipts of cash deposits ease the bank's position and incline it to extend loans to an amount about equal to the cash received, deposit liabilities tend to increase and decrease *pari passu* with loans and discounts over a period of time. Temporary conditions may obtain in which deposits of any one bank or group of banks may expand faster than loans, or loans may even be decreasing. Instance the New York Clearing House banks the first week of April, 1917, when loans contracted nearly $40 million while deposits expanded over $86 million; the contraction largely reflected the withdrawal of funds from the time market in anticipation of the Victory Loan, and the expansion of deposits represented the flow of funds from interior banks to New York for investment in the call market. During 1915–1916–1917, before the United States entered the war, the heavy importations of gold from abroad created such an easy money market that bankers found real difficulty in loaning funds as fast as they came from depositors. On the other hand, loans may increase faster than deposits, and then the money market will tighten.

The history of the ratio of loans to deposits in the New York Clearing House banks is shown by Figure 1. It will be noted that at times of crises the ratio of loans to deposits runs high (instance the autumns of 1904 and 1907, the midsummer of 1914, and the latter part of 1917) and then falls precipitately as contraction develops.

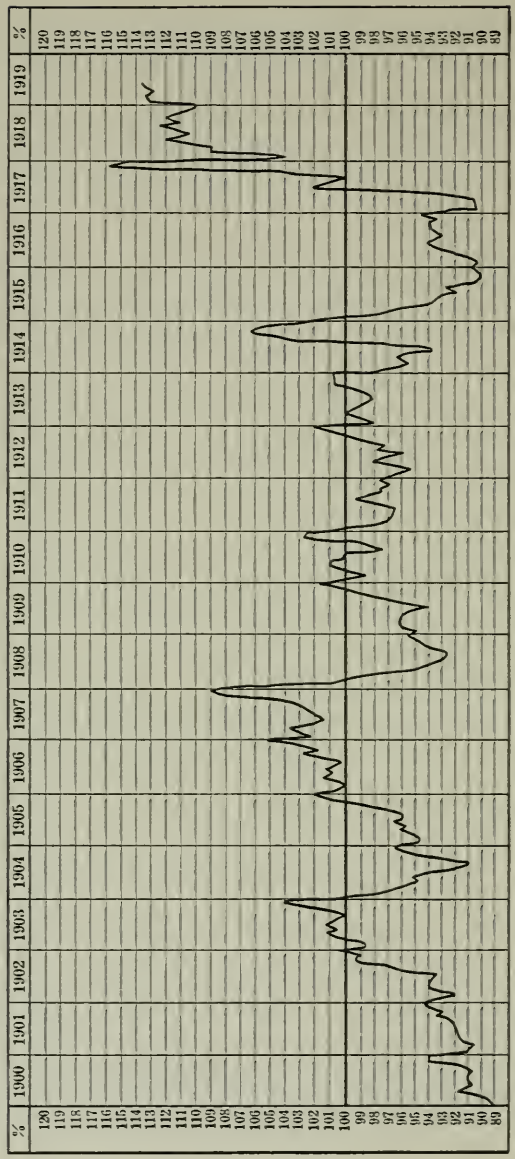

FIGURE 1. Graphic Chart Showing Ratio of Loans to Deposits of New York Clearing House Banks

Bank Notes

White's last two statements (see page 73 above) of assets and liabilities showed the alternative effects of his paying for discounts with cash or deposits; the two previous statements showed the similar alternative effects of his making loans in cash or deposits; and the first statement showed deposits arising by the deposit of cash or cash items. Another alternative was open to White in each case. Instead of paying cash or crediting deposits to be drawn later by order, White might have paid by simple promissory demand notes payable to bearer. These notes would be in small denominations, round amounts, and convenient size, and, if White was well-reputed, would be readily accepted by others and would tend to circulate as money. If the proceeds of the $35,000 of discounts had been paid in bank notes, the financial statement in this case, starting with the figures given in the last statement on page 73, would have been as follows:

Assets		*Liabilities*	
Cash	$100,000	Deposits	$145,000
Loans and Discounts	80,000	Bank Notes Outstanding	34,000
		Discount	1,000

Obviously many variations may be introduced here to indicate part payments of loans, discounts, collections, and so forth, in cash, deposits, and bank notes. For instance, items to the amount of $27,000 may be discounted and the proceeds, $25,000, be paid, one-fifth in cash, two-fifths in bank notes, and the rest credited as deposits, with the following results on the last statement:

Assets		*Liabilities*	
Cash	$ 95,000	Deposits	$155,000
Loans and Discounts	107,000	Bank Notes Outstanding	44,000
		Discount	3,000

Summary—The Three Functions of Commercial Banking

The three fundamental functions of commercial banking are, then, discount, deposits, and note issue; discount (and loan) is, in practice, but one method of creating deposits and note issue; and the three functions readily reduce themselves to one, namely, the guaranty of the credit of individuals. The guaranty is effected by a highly developed, specialized, and well-known institution, holding a liquid cash reserve, as well as quickly convertible assets, and standing ready to exchange its own credits for those of customers.

Capital

In the discussion in the previous sections, White has been doing business entirely on his customers' money and his own credit. No mention has been made of any direct contribution of funds by himself; he started with a deposit transfer business, and later developed a loan and discount business and a bank note issue business. Undoubtedly any person who deposited money directly with White, or who borrowed from or sold discounts to White and left the proceeds on deposit with him, or took his notes in payment, that is, any person who became his creditor, would more readily become creditor if White himself were willing to put up a guaranty fund and thus increase the assets out of which the creditor could recover. Such contributions by A are generally made from the very start; they give confidence to would-be creditors that he will be willing and able to repay and make good his promises, and, of course, the greater such contributions the greater the security to the creditors, for they can collect, not only against the assets procured by White through their own cash deposits, but also against the assets procured by White through his own contributions.

Such original contributions are called "capital." White usually associates with himself other persons who likewise contribute capital. Ownership of the assets of the association is then in pro-

portion to the contributions; profits, losses, and responsibilities are proportioned upon the same basis. The association may be incorporated under the laws of the state and capitalized at, say, $100,000, the capital contributions and ownership being evidenced by $100 shares of capital stock. Subscriptions (contributions) to the capital stock may be in cash, real estate, securities, promissory notes, or other assets. If the subscription is paid in cash, some of it would be immediately invested in a bank building, furniture, and fixtures, and the rest of it, along with funds deposited by depositors, gradually absorbed in investments, loans, and discounts, real estate, cash reserve, and so forth.

As a result of all this White has now become a full-fledged banking company.

Surplus and Undivided Profits

The company may, voluntarily or by force of law, over a period of years add to the original capital contributions by withholding part of its earnings, not declaring them in dividends and converting them into a "surplus" fund. The state law, as a protection to the bank's creditors and as a means of adding to the stability of financial institutions, may require that the bank accumulate a surplus equal to, say, 40 per cent of its capital and that a certain fraction of the yearly earnings be diverted to that fund until it is filled. To make their bank's statement somewhat more comparable to those of other institutions, and also to reduce the extra liability that may attach to stock ownership, the founders of the bank may start with a capital of $100,000 and a surplus of $100,000 rather than with a capital of $200,000. The surplus accumulated in an old bank may be many times its capital.

Public policy requires that capitalization bear a rough proportion to the size of the business done; and, since size of business is roughly proportional to the population of the domiciling city, the state and federal laws have fixed the minimum capitalization of banks in various sized cities.

The existence of a fair-sized surplus also promotes stability in corporate control. If in bad years net operating deficits had to be met by assessing the stockholders rather than by using up the surplus, the wealthy stockholders would be at an advantage over the poorer, who would find it difficult to meet the assessments. In fact the corporation might fall into the control of unscrupulous men who would purposely operate it at a deficit in order to "freeze out" the weak stockholders. This operation, however, is less likely to succeed if a large surplus must be exhausted before assessments can be put on stockholders.

To maintain a working balance, the bank does not declare all its earnings as dividends nor convert them into surplus, but retains a relatively small amount as "undivided profits." The capital, surplus, and undivided profits represent the original and accumulated contributions of the owners of the bank, and serve as a buffer to reinforce the claims of the bank's creditors. These contributions, along with the funds contributed by creditors, are invested in various assets, only a small part of which is held as cash reserve.

It is wholly wrong to think that surplus and undivided profits constitute a fund of cash in the bank, or any other particular form of assets. The surplus together with the undivided profits is a property right (in proportion to the shares owned) of the stockholders in the general assets, and as such is a valuation item in the financial statement. The accumulated aggregate assets have a book valuation more or less equal to the market valuation. This book valuation, less the creditor liabilities and the capitalization, is the surplus. If the book valuation exceeds the market valuation, the surplus is not substantial; on the other hand, if the assets are undervalued, the bank creditors have more protection than is shown. Capital and surplus protect depositors and noteholders, for in case of liquidation the greater the actual value of the assets belonging to stockholders the more are the funds that can be realized for the bank's creditors.

CHAPTER VI

BANK OPERATIONS AND FUNCTIONS

Fundamental and Other Functions

The activities described in the preceding chapter as discount, deposit, and note issue are traditionally called the fundamental functions of commercial banks. "Function" here means the course of action which peculiarly pertains to or is appropriate to the institution. The operations of discount, deposit, and issue have been shown to be reducible to a guaranty of private credit or to a substitution of bank credit for private credit. These operations are not, of course, ends in themselves, but activities toward accomplishing ends. Some recent writers on banking call these immediate activities banking "operations" and their ends, banking "functions." Although in the further analysis of causation these so-called "functions" will be but "operations" to even more remote ends, it may be well to consider the activities so distinguished as functions.

In the other volumes of this book many other banking operations than discount, deposit, and issue will be described. Some of them have become traditionally associated with banks and are peculiarly appropriate to them. Banks could not continue in business unless they performed a wide variety of operations which competition has forced them to assume. These operations are usually incidental to discount, deposit, and issue, and are performed for borrowers or depositors and in consideration of their accounts. Other activities may be undertaken by a bank because it has an organization that can assume and execute the additional duties more economically than specialized organizations could do. Some of these activities may produce no small part of the bank's earnings and therefore seem quite essential; others are purely

adventitious and occasion a large net expense, but are undertaken for the indirect benefits that accrue from general publicity.

Banks as Credit Markets

Banking operations facilitate the production and distribution of goods. They do this by organizing the market for credit, by negotiating between lender and borrower, by rendering an ever larger volume of our collective wealth into "bankable" form and promoting, not only its transferability but also its actual transfer to the most effective uses. The lender repairs to the bank to deposit (lend, invest) his surplus, the borrower goes there to find accommodation; the bank is the organized credit mart. As a basis of credit the banker increasingly accepts stocks, bonds, mortgages, bills of lading, warehouse receipts, and other property rights in wealth that is not itself available as a basis of credit; possession of such titles can in this way be made the means of procuring bank funds, purchasing power, and finally control over other wealth useful in production and distribution. The banker determines largely the personnel of the business world; he is a shrewd judge of ability to produce and distribute efficiently; he seeks as customers those who by their financial record and originality, aggressiveness and opportunity, promise well, and he discourages the opposite sort of applicant.

The American tradition holds that commercial banks should finance only short-term, self-liquidated transactions and should leave the provision of permanent capital to specialized investment institutions. The theory is that, since the liabilities of the bank are demand liabilities, the assets must largely consist of cash, and that short-term, self-liquidating paper is the most convertible and manageable earning asset. This traditional theory bears the approval of state and federal law, and the banking system conforms nominally to the theory; but an examination of the business (banking and investment) situation reveals the following facts:

1. No small part of commercial loans are provisions of permanent investment capital.

2. Industrial loans which finance the purchase of raw materials and labor to make a marketable product are quite as good bank assets as commercial loans to finance the marketing processes.

3. The so-called self-liquidating loans are largely liquid only with respect to individual banks and not to the banking system as a whole.

4. Liquidity is mainly a matter of high organization of the market for credits and of the markets for the various forms of collateral.

Extensions of Investment Credit

To the degree that banks invest in stocks and bonds of corporations, they contribute fixed capital to enterprises. The purchase of securities is the practical equivalent of loaning funds; loans to purchase securities which are then pledged to secure the loans are practically vicarious purchases of the securities. That there is a marked tendency for commercial loans to become continuous and permanent is due to the fact that production tends to become more and more capitalistic and continuous operation more and more necessary for efficiency, while improved facilities in distributing products lengthen the period of consumption and reduce the seasonal feature of business. Probably a fifth of commercial bank loans are now for investment purposes.

The one-time practice of banks of insisting that their borrowers "clean up" their loan account at least once a year has nearly ceased, except in lines of business having one or two definite seasons, and loans are indefinitely renewed time after time, or if borrowers are required to "clean up" they may borrow at one bank to "clean up" at another. Large borrowers sell their notes widely over the country through note-brokers; to pay a lot of notes maturing and due to holders in one section of the country,

another lot will be issued and sold either to these same holders or to purchasers in other sections; thus the banking system as a whole supplies permanent working capital. The individual bank, however, may decline to renew a loan or to purchase the renewal paper, and thus not itself provide permanent capital.

When the whole banking system is considered, it is clear that commercial paper is only to a small extent self-liquidating. The banks renew loans freely, as just noted; their regular customers depend upon this accommodation, and large contraction or refusal to renew loans is quite impossible, especially in time of panic. When a borrower becomes strong enough to borrow through sale of his paper widely over the country and any holder refuses to purchase the renewal paper, he can borrow from other banks. The holder bank may also at any time sell the paper to another bank. Thus rediscount gives liquidity, but rediscount is simply a shifting of assets as between banks and as between forms of assets. One of the specific purposes in developing the federal reserve banks was that of providing central banks where paper holdings of needy banks might be converted into cash funds by this process of shifting assets. The capacity of the federal reserve banks to liquefy by rediscounting comes through their ability to tap unused reserves and to create federal reserve notes, which in the tills of the banks constitute not only a paying medium but also an actual reserve, although not termed "reserve" by the law.

Loan Ratios as Business Barometers

The sum of a bank's investments in securities and of its loans and discounts represents its contributions of capital to business. A part of these funds was originally deposited as cash in the bank; the rest have been created by the bank. Bank notes and deposit liabilities have been created and exchanged by the bank for various credit items of borrowers, while the borrowers possessing these bank notes, deposits, or actual government money, have

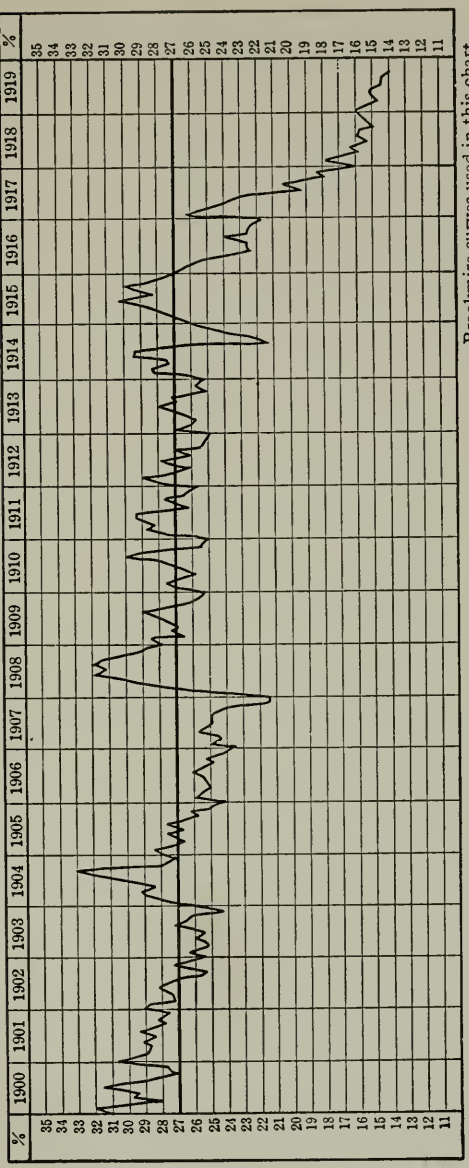

FIGURE 2. Graphic Chart Showing Ratio of Cash Reserves to Loans of New York Clearing House Banks

been enabled to procure materials, labor, tools, plant, transportation, and the like. The funds put into investments and some indeterminate proportion of the loans (and discounts) represent contributions of permanent capital. The proportion of the loans which constitutes permanent advances of capital ranges in all probability from 20 to 50 per cent. The tendency is to increase.

The ratio of cash reserve to investments, plus, say, 30 per cent of loans, is therefore a measure of the degree to which a bank contributes permanent capital to business. The ratio of cash reserve to, say, 70 per cent of loans, measures the temporary advances. Users of business barometers watch closely the less complex ratios of: (1) cash reserve to loans, (2) investments to aggregate assets, (3) loans to aggregate assets, and (4) the sum of loans and investments to aggregate assets. The history of the first, third, and fourth ratios is shown in the accompanying charts (Figures 2 and 3), and by subtracting the third from the fourth the second can be obtained. During the war the increase of bank cash reserves in this country did not keep abreast of the expansion of loans, the result being that the ratio of cash reserves to loans decreased precipitately. The loan account developed into an unprecedented state of extension; the banks met the urgent demands for funds to finance the war and war industries; an excessive proportion of the loans was collateraled by United States securities, and did not necessarily represent contributions of working capital to industries. The percentage increase of securities, largely United States war securities, purchased by the banks rose faster than the percentage increase of either loans or aggregate assets. As the purchase of securities is from the bank's point of view in many respects equivalent to a loan to the seller, these large purchases during the war had the effect of increasing the multiple to which banks create a loan fund on the basis of cash reserve. It might be said also that the contributions of permanent capital by banks were in effect increased both absolutely and relatively. Some liquidity was given to the war loans by

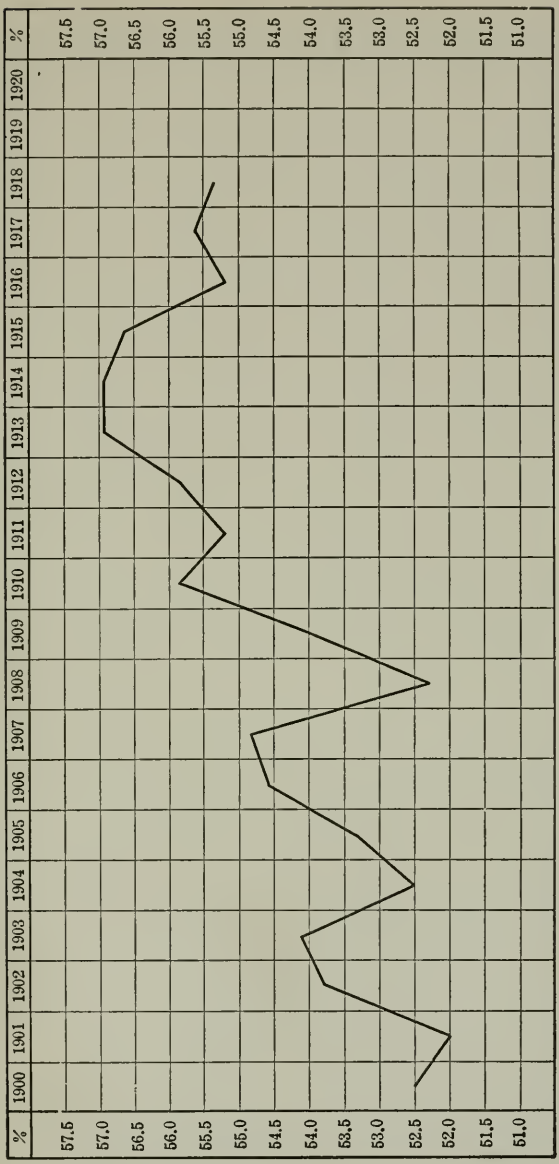

FIGURE 3. (a) Graphic Chart Showing Ratio of Loans to Aggregate Assets of All Banks Reporting to Comptroller

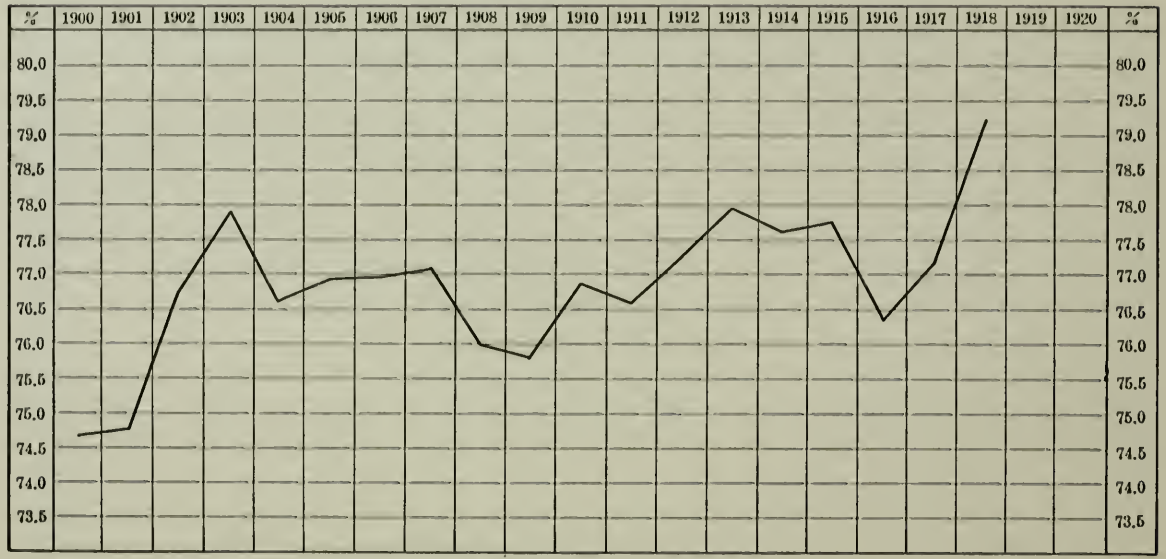

FIGURE 3. (b) Graphic Chart Showing Ratio of Loans and Investments to Aggregate Assets of All Banks Reporting to Comptroller

making paper backed by war securities eligible for discount with the federal reserve banks.

To put some fraction of a bank's funds into permanent investments is altogether safe and fitting, for in emergency they can be readily converted into cash through the stock exchange. Extensive dependence of all the banks on the securities market for such conversion, however, becomes positively dangerous. In order to accomplish a sale in a tight money market, not only must securities be sacrificed at great losses but the buyers go to other banks to withdraw funds to do the buying, thus making the market still tighter and tending to precipitate a panic. Accordingly the business world takes note of the ratios of loans and investments to total resources. The banking situation of the country becomes more critical as the proportion of loans to aggregate resources increases, because such a change means an absorption of the loan fund; and it becomes even more critical as the ratio of investments to aggregate resources increases, for the additional reason that a larger proportion of banking funds is being tied up in long-term securities which are difficult to liquefy. Babson summarizes the barometrics of these ratios as follows:[1]

1. During a period of business depression:
   (a) An increase in the ratio signifies renewed activity.
   (b) A decrease signifies a further recession in business.
   (c) No change signifies continued dullness.
2. During a period of improvement following a period of business depression:
   (a) An increase in the ratio signifies increased activity.
   (b) A decrease signifies a temporary recession.
   (c) No change calls for special watchfulness.
3. During a period of prosperity:
   (a) An increase in the ratio signifies that fundamental conditions are becoming unsound.
   (b) A decrease tends to prolong the period of prosperity.
   (c) No change signifies nothing of importance.

[1] Babson, R. W., Business Barometrics, 1918, p. 272.

4. During a period of decline following a period of prosperity:
   (a) An increase in the ratio signifies further trouble.
   (b) A decrease is the natural movement.
   (c) No change calls for special watchfulness.

Effect of Other Operations on the Bank Statement

So far as developed in the preceding sections, the operations of White, the bank, might result in a capital statement such as the following:

Assets			*Liabilities*	
Loans and Discounts		$304,395	Capital	$100,000
Cash:			Surplus	50,000
Gold and Silver Dollars	$22,104		Undivided Profits	10,323
Government Paper Money	3,033		Deposits	218,442
Subsidiary Silver	273		Bank Notes Outstanding	20,000
Minor Coins	15	25,425		
Investments		68,945		
		$398,765		$398,765

It is now proposed to explain certain other simple but typical operations, and indicate their effects upon the bank's statement.

The accounts entitled "Due from Banks" and "Due to Banks" arise because the bank finds it expedient to open accounts with other banks, and to deposit certain of its funds with them. These depository banks are called "correspondents." Such accounts serve among others the following purposes:

1. They enable the bank to sell drafts against this distant metropolitan correspondent and charge exchange for the service.

2. The banks may arrange mutually to act as collecting agent one for the other, and possibly charge for the service.

3. In time of stress the local bank can count on accommodation from the metropolitan correspondent.

4. The correspondent may furnish special services for the local bank, such as credit advice, investment of funds, safe-keep-

ing of securities, and the like. The local bank may in turn carry accounts of banks for which it acts as correspondent.

Whenever a statement of the bank is made, therefore, among the assets will appear Due from Banks, and among the liabilities Due to Banks.

If a draft is sold by the local bank, the Due from Banks is reduced by the face amount of the draft. Undivided Profits is increased by the charge for exchange, and, if the face of the draft and the exchange charge are paid in cash, Cash will be increased by these amounts. If, however, the buyer of the draft pays by check on the selling bank, Deposits is reduced, and if by check on other banks, Due from Banks is increased.

When items are received for collection and credit, the local bank credits the remitter's (or depositor's) account with the face amount of the items—that is, credits Deposits and carries items among the assets as Collection Items in process of collection; when collected, either Cash or Due from Banks is increased. Checks on local clearing house banks are usually separated from checks on out-of-town banks and are reported as Clearing House Items.

The purchase of a site, a building, furniture, and fixtures, reduces the bank's Cash or its balances Due from Banks. Such payments by the bank are usually made by cashier's checks or drafts; while these checks are outstanding they appear among the liabilities, and when they are presented for payment, Cash will be reduced.

Stationery, wages, salaries, rent, taxes, and so forth are expense items that will likewise be paid by cashier's checks. Temporarily they will appear as Expense among the assets and Cashier's Checks among the liabilities; the ultimate disposition will be the reduction of Cash by payment of the checks and the reduction of the Undivided Profits.

Customers may deposit cash funds and take certificates of deposit, which will thereafter appear among the liabilities.

These certificates state that the customer deposited a certain amount on a given date, which will be repaid to him with interest at a stated rate provided payment is not demanded within a stipulated time.

If a depositor overdraws his account, the drawee bank may exercise its discretion at paying the amount. If allowed the drawer's account (his Deposits) is wiped out, and the bank has a presumptive claim against the drawer for the deficit, which it lists among its assets as Overdrafts. Cash is reduced by the face amount. If this check had been presented through a correspondent bank the Due from Banks would be reduced by the face amount.

In the case of the issue of bank notes by a national bank, the issuing bank must first buy or borrow United States bonds to pledge with the United States Treasury as security; this reduces Cash and increases Investments, or else puts among the liabilities Bonds Borrowed and adds to Investments. The National Bank Law requires that a redemption fund of 5 per cent of the notes issued also be kept in gold at Washington; this reduces Cash but adds a new item, Redemption Fund, to the assets. The bank notes come to the paying teller, and he puts them into the Cash of the bank, and an equivalent liability, Bank Notes Outstanding, appears in the statement. Whenever any of the notes are presented to the bank for redemption, Cash in the statement is unaffected, for one form of cash is simply substituted for another; but when presented at Washington for redemption, the Redemption Fund is reduced and Bank Notes Outstanding is also reduced.

If Undivided Profits becomes large, the directors may decide to increase Surplus and declare dividends. Then Undivided Profits will be reduced at once by the amount put into surplus and dividends; the dividends will be carried temporarily as Dividends Declared but Unpaid; when paid, this item will disappear and Cash be reduced.

If the book values of certain assets are found too high, because they were originally overvalued or have meanwhile depreciated or have proved uncollectible, and it is necessary to scale down the valuations, the asset, Investments, or Loans and Discounts, or Real Estate, Buildings, Fixtures, or whatever asset it may be, is reduced, and Undivided Profits is reduced a like amount.

The local bank may be pressed for funds, and be forced to borrow from its correspondent on the basis of its promissory note secured by discount paper from its note pouch. Its Cash and Due from Banks will be increased and Bills Payable will then appear among its liabilities.

The bank may issue letters of credit by which it agrees to accept certain drafts or bills of exchange drawn upon it. Later when these are presented for acceptance, the bank will incur specific liability for Acceptances. These liabilities are equalized by the introduction of the corresponding assets, Customers' Liability Under Letters of Credit, and Customers' Liability for Acceptances Executed. The nature of these operations will be detailed in a later chapter (see Volume V, Chapter LXI.

Typical Bank Statement

The combined effect of these and other transactions is to render the statement into that of a typical commercial bank.

There is, however, no uniformity of style or titles in the published statements, whether of the same or different classes of banks. Uniform accounting is somewhat promoted by government supervision of banks and the requirement of periodic reports. Nevertheless in the publication of their financial statements wide variation occurs because bankers have different conceptions of what constitutes a good report, because the statements are adapted to different clienteles, and because the bankers have different motives to serve. These purposes are attained by combining items under varying heads. The following is a typical statement of a small bank.

Assets		*Liabilities*	
Loans and Discounts	$ 458,426	Capital	$ 100,000
Cash	44,975	Surplus	75,000
Investments	95,000	Undivided Profits	16,312
Real Estate and Bank Building	21,000	Dividends Declared but Unpaid	4,000
Furniture and Fixtures	5,000	Bonds Borrowed	20,000
Expense	1,252	Deposits	487,345
Bonds Loaned	10,000	Cashier's Checks	45,000
Collection Items	35,000	Bank Notes Outstanding	40,000
Clearing House Items	78,000	Certificates of Deposit	55,000
Redemption Fund	2,300	Acceptances	80,000
Overdrafts	4,621	Due to Banks	48,000
Due from Banks	165,000	Letters of Credit	95,000
Customers' Liability Under Letters of Credit	95,000	Bills Payable	20,000
Customers' Liability for Acceptances Executed	80,000	Reserved for Taxes, Insurance	6,000
Other Assets	7,396	Other Liabilities	11,323
	$1,102,970		$1,102,970

Clearings and Collections

In the process of executing the functions of loan, discount, deposit, and note issue, and of the incidental business of the bank, there come into its possession numerous forms of credit items which must be presented to the respective debtors for payment. Preliminary, however, to a discussion of the various operations performed by a bank with this end in view, involving as it would an explanation of clearing house procedure and out-of-town collection methods, consideration should be given to the factors that determine when a credit instrument will be presented for payment.

There are various factors which determine when a credit instrument will be presented for payment. These include the question whether the item has a fixed maturity, whether it bears interest, whether it can be used as a medium of exchange or as bank reserve, and whether the law requires presentment within a certain time.

Of the four common forms of bank liabilities to creditors, the first two—Bank Notes and Deposits—are generally payable on demand and do not bear interest, whereas the other two forms—

Bills Payable and Acceptances—are payable at a time fixed by the date of acceptance and the terms of the papers and may or may not bear interest. As a check cannot be readily used by the payee in making payments or for reserves and does not bear interest, the holder has funds which are useless, and at the same time he incurs a certain risk that the check will not be honored. In addition the statutory or common law may require him to present the item for payment within a certain time. Bank notes, on the other hand, attain to general acceptability because the holder may make payments with them and one bank may use the notes of other banks as reserves. If the law were to prohibit such uses, bank notes would be collected at once upon receipt, just as checks are; otherwise the holder would lose the use of the funds represented and the debtor would have them meanwhile without having to pay interest. Acceptances and bills payable having a definite maturity must be presented for payment at the time of maturity. If interest ceases at maturity it is financially profitable to present the item at that time and the law may also require such presentation so as to protect the indorsers of the instrument.

Methods of Presentment

The method of presentment of an item for payment is determined by its cost and by legal requirements. The costs include the clerical work, messenger service, loss of interest on idle funds, risks of carrying the items or moneys in the street or in the mails, and so forth. Items on institutions in the holder's city are collected either by messenger or through the clearing house. A clearing house is now established in every city of considerable size and the items collected by messenger include merely those on institutions not members of the clearing house, documentary items, special advice items, and large sight items. At the bank the city collection clerk dispatches messengers over prescribed routes with these collection items.

The Clearing House

The clearing house is an association which provides a common meeting place and facilities for collection messengers to exchange their reciprocal claims on each other and settle the net balances only. Suppose, for example, that in a city with five clearing banks, the claims on a certain day are as follows:

	Claims By					
	Bank A	Bank B	Bank C	Bank D	Bank E	Total
Against						
Bank A.....	.....	$1,285,434	$1,492,398	$ 923,619	$ 99,645	$3,801,096
Bank B.....	$ 663,957	.....	482,337	537,948	113,151	1,797,393
Bank C.....	559,527	651,735	.....	292,119	454,638	1,958,019
Bank D.....	724,788	912,954	327,972	.....	54,468	2,020,182
Bank E.....	153,663	196,761	187,764	1,390,188	.....	1,928,376
Total:						
Due to.....	$ 2,101,935	$3,046,884	$2,490,471	$3,143,874	$ 721,902	$11,505,066
Due from...	3,801,096	1,797,393	1,958,019	2,020,182	1,928,376	11,505,066
	$—1,699,161	$1,249,491	$ 532,452	$1,123,692	$—1,206,474	.....

Then the equation of debit and credit balances is:

$$(1{,}249{,}491 + 532{,}452 + 1{,}123{,}692) = (1{,}699{,}161 + 1{,}206{,}474) = 2{,}905{,}635$$

The banks A and E are net debtors to banks B, C, and D, and the payment of $2,905,635 balances settles their combined clearings of $11,505,066.

The economies of this clearing plan are evident. The items can be more expeditiously handled if put into one messenger's box and carried a short distance to the clearing house than if put into many boxes and carried to the respective drawee banks. Only the net balances of the day's exchanges need be paid in money and carried in the street, thus reducing risk and expense, and this expense may be further reduced by depositing funds with the clearing house for clearing house certificates which may be used to settle balances. Each bank needs to carry a much smaller

amount of till money, for the sums due to and due from the bank are offset synchronously and the bank does not have to provide in advance cash enough to pay the whole of the sums due to other banks. Finally a great economy of time results, inasmuch as system and uniform rules are devised for the prompt exchange of items and settlement of balances. The effect of the whole process is to offset indebtedness and conserve the use of money.

Out-of-Town Collections

To collect out-of-town items, one system is to effect arrangements whereby the correspondent acts as agent, collecting items on banks in its city through the clearing house and on banks in its vicinity through subcollecting agents. Since checks are payable at the drawee bank's window, the drawee bank remits for the proceeds after deducting exchange charges presumably to cover the expense of maintaining a balance with the sending bank against which drafts may be drawn to make remittances. The law holds a bank to the exercise of due care in choosing collection agents and to reasonable promptness in sending and remitting for items. Sending an item directly to the drawee bank, however, unless the principal bank expressly permits it, is held to be negligence, and therefore the collecting bank sends the item to subagents in the same city as the drawee bank. The terms of agreement between the depositor and the collecting bank as to collection charges, the time when items are credited to the account, and the reciprocity of collection services, are various. This system results in indirect routing of items to save collection charges, and therefore in too large an amount of funds being afloat in the mails.

To cut down the expense of this system of out-of-town collections, co-operative "country" clearing houses have been established in some of the chief cities as adjuncts to the city clearing house. A member sends to the country clearing house such of its out-of-town items as it desires and is permitted to send. All

items on one drawee bank, or on the banks of one city, are put into one envelope and mailed to that bank or the agent of the clearing house in that city. The bank or agent makes out one lump remittance to the clearing house, which settles with its members. This system of co-operative collections may go further and require all drawee banks to remit at par for all items sent to them, and then assess the expense of the country clearing house upon the depositing banks at so much per item or per dollar collected.

CHAPTER VII

PROTECTION OF BANK NOTE HOLDERS

Nature of Bank Notes

In case the seller of discount items (the borrower) or his business clientele does not understand the deposit-check-paying system, he will probably ask that the proceeds be paid to him in cash. The bank then has the alternative of paying him in lawful money or of paying him in its own notes if they have attained to general acceptability. Such notes are simple promissory notes of the bank, issued in round, small denominations, and promising to pay the bearer on demand. The seller of the discounts may consciously accept these bank notes without hesitancy because he knows they pass freely as money, or he may accept them unconsciously through custom or through ignorance of their exact nature.

Bank Notes and Deposits—Similarity

Bank notes and bank deposits are essentially alike. Both are liabilities of the bank, deposits being payable to the depositor or his order as evidenced by the check, notes being payable to the holder, and both being payable on demand. Moreover, reserves are held against both, and both notes and deposits increase the purchasing power of their holder wherever the bank's credit is accepted.

To judge from the prevalence of erroneous and misleading statements by newspapers and the general public, it would seem that the writers on banking theory have not given sufficient emphasis to the essential likeness of bank notes and deposits. The bank itself is largely indifferent as to which of these two forms of credit the customer requests, and the customer acts as

occasion demands, turning in bank notes for credit to his deposit account, or having his check "cashed" in bank notes, both bank and customer distinguishing these two credit forms only with respect to convenience. Neither form increases directly the wealth of the bank, the customer, or the country; they are both credits and give the holder claim to existing wealth, but are not themselves wealth. The issue of a billion dollars of bank notes or the creation of a billion dollars of deposits by the process of loans and discounts does not of itself increase the wealth of the country one whit. To regard the deposits of the banks of a country as an index of the growth of the country's real wealth is a serious error. It is still more serious to measure the strength or greatness of a bank or banking system by its deposits, such a measure indicating an error, not only in not adding bank notes to deposits but also in regarding a liability of a bank as an element of strength. It is *assets* alone which constitute the strength of any institution.

The failure to recognize the similarity of bank notes and deposits appears most often, however, in statements about inflation. It is not often realized that inflation of price levels is caused by deposits no less than by bank notes—and indeed that the influence of deposits is the sooner felt. The offer of either bank notes or checks will effect a purchase. The mere existence of a large amount of either bank notes or deposits does not affect prices; it is only as notes or deposits are offered for goods that the demand side of the market expands and raises prices. In the actual process of economic life it happens that purchases, and therefore inflation, through the medium of deposits often precede inflation through the medium of bank notes. Generally in times of increasing trade activity wholesale prices rise before retail prices, and the wholesale prices are affected almost wholly by deposits. The dispersion of these deposits by manufacturers, jobbers, and retailers for wages and materials requires circulating notes, which then in the hands of small holders occasion retail

demand and consequent rise of retail prices. The point is illustrated by the recent process of percolation of the huge war credits through the munitions manufacturers to the wage-earners, with the consequent increase in the quantities of federal reserve notes and the rise in the cost of living.

Bank Notes and Deposits—Differences

Although bank notes and deposits are thus much alike in nature and effects, they have, nevertheless, fundamental differences.

Deposits are circulated by checks or drafts—that is, orders to pay, which are not necessarily obligations of the bank until accepted, certified, or honored by the bank, and anyone who is offered a check may doubt the drawer's right to draw and the bank's ability or willingness to pay. Moreover, checks are drawn in odd sums, large and small, and are difficult to use in exchange. The result is that checks have a limited acceptability —particularly in the country or in backward communities; whereas bank notes, being direct obligations of well-known institutions, in sums of convenient size, and not necessitating indorsement, have a general acceptability and pass current as money.

On the other hand, checks combine safety and convenience in ways that bank notes do not. The requirement of indorsement renders theft of a check useless to the thief unless he resorts to the further crime of forgery. The security of the check is increased with every indorsement, which makes it both individual credit and bank credit, whereas the bank note is wholly bank credit. Another advantage of the check is that the voucher is a receipt of payment, and still another advantage is that any amount, large or small, in odd or even sum, can be paid by check with equal facility.

Another difference between the two lies in the circumstance that the depositor becomes a creditor of the bank voluntarily and, being usually a person of business capacity, selects his

bank with more or less acumen, whereas a noteholder becomes a creditor of a bank unconsciously, for the most part, since the note passes current by custom. Then, too, deposits are peculiar to the business and higher classes, while bank notes are used relatively more by a lower class and get into the hands of persons who know little if anything of bank note issue or of banking in general.

Finally bank checks and drafts, having but limited acceptability, are soon presented for acceptance or redemption; the bank accordingly constantly faces the necessity of providing a reserve for this purpose. Furthermore, when once received by a bank, unlike bank notes, they cannot be paid out again to customers nor can they be used for reserves. For its own protection, therefore, and to make maximum use of funds, the checks are immediately collected by the bank. Bank notes, however, enjoy a greater credit and acceptability. They circulate over a broad field, they are paid out again by receiving banks unless prohibited by law, and they may even be legally used as bank reserve for other than the issuing bank; consequently they remain out in circulation for long periods. Their higher credit removes the motive of presenting for redemption. Meanwhile the bank has felt less necessity for keeping a big reserve or any reserve at all, trusting to be able to meet the few redemptions by use of the casual till money. Under such conditions there is great danger of failure of the issuing bank—a danger which grows apace with the period over which the notes stay out.

Reasons for Special Protection of Noteholder

The proper protection of noteholder and depositor is an important matter. Obviously since the noteholder is the more likely to suffer, owing to his ignorance of the nature and course of the bank note, if special protection is to be given to either class the noteholder has the higher claim. Governments early felt it incumbent upon themselves to provide special protection to note-

holders, but except in the United States they have not felt a corresponding duty towards depositors. This difference is due to several reasons. For one thing the essential likeness of notes and deposits has not been generally perceived. Then, too, the bank note enters into the circulating money of the country, and the state has generally assumed the creation and regulation of its money. Moreover, the abuses of note issue are more readily discernible and the methods of protection more easily devised. And finally the depositor may reasonably be assumed to know the state of solvency of the bank of which he is a customer. On the other hand, it would be too much to expect a person to have all this knowledge concerning the numerous banks whose notes pass through his hands in the course of his daily business. For these various reasons legislatures have quite generally provided more protection to notes than to deposits. The United States, with respect to the national banks, and the several states, with respect to the state banks, have been unique among the governments of the world in devising protection to depositors.

Currency Principle versus Banking Principle

The matter of protection of bank credit has been the bone of contention between two schools of banking thought—those who believe in the "currency" principle and those who adhere to the "banking" principle. The former believe that bank notes by entering the currency displace so much gold, which is driven abroad, that such an issue of notes might completely expel the gold and force the country to an inconvertible depreciated basis, and that therefore the state, to protect itself and its citizens, must so regulate bank note issues as to prevent such results. The adherents of this theory would make the bank notes practically gold certificates with 100 per cent gold reserve, or if that were impossible, would minimize the uncovered issue.

It is evident that this theory emphasizes the safety of the currency but makes its volume constant and inelastic, neither of

which is desirable. The volume of bank notes should expand and contract freely with the needs of business; if it does not the price level must vary inversely as business activity, or else the elasticity must be provided by deposit currency.

The adherents of the banking principle, on the other hand, hold that the right of note issue should be full and unlimited at the discretion of the banker who for business reasons, they assert, will find proper protection and reserves for noteholders and depositors, and who, so long as he keeps notes convertible, can bring neither the bank itself nor the business community into any danger. Should the notes become inconvertible, this theory holds that a redundant depreciated circulation would result, but if the notes are kept convertible the bank can only put a definite quantity into circulation, any excess being returned to it for redemption and for the liquidation of old loans.

This principle is sound except that there is no safeguard against imprudent and reckless banking. With conservative bankers the maintenance of convertibility would be unquestioned, but if bankers should become reckless and give loans on easy terms the note issue would readily expand until the possibility of converting upon demand would cease, provided demand were at all general. To curb the reckless banker and protect creditors against his extravagances is the aim of modern bank regulation.

Safeguards Against Bank Insolvency

The protection of bank credit resolves itself into two general lines: (1) the establishment of safeguards against the bank's insolvency, and (2) special protection of its creditors against the suspension of specie payments.

Insolvency is a condition existing when liabilities, other than to stockholders, exceed assets; under such a condition the bank would be unable, even after all assets had been liquidated, to pay noteholders and depositors par on their claims. Insolvency is guarded against by the owners of the bank subscribing capital

and by accumulating a large surplus to act as buffer. The capital subscribed should bear a reasonable ratio to the volume of credits extended; the maximum amount of this ratio may be decreed by law. When, however, banks are organized and capitalized, it is impossible to fix such capital requirements in advance, for no one knows what volume of business will be the fortune of the incipient bank. The state assumes, however, that the size of the bank and the size of the city in which it is domiciled bear some ratio, and accordingly the minimum capitalization of banks is roughly proportioned to the city's population.

Laws further require the accumulation of some minimum surplus, usually a percentage, 20, 30, or 40 per cent of the capital, during its earlier years. Any bank aspiring to greatness inevitably accumulates such surplus and usually maintains it far in excess of the required minimum; such surplus not only is evidence of strength, age, and conservative policy, but provides working and earning funds. Our National Bank Law and some state bank laws impose upon the bank stockholders a double liability—that is, the stockholders in case of the bank's failure can be held for an additional amount equal to the par value of their shares, and this liability is a contingent asset of the bank. The accumulation of a large surplus, however, renders the use of this asset improbable, and the growth of the bank's credits outstanding renders the protection afforded by this double liability of the stockholders relatively less important. In the light of their dividend percentages most banks are undercapitalized, but their creditors do not suffer therefrom since the accumulation of surpluses many times the size of their capital serves the same ends as a buffer against insolvency.

Other lines of protection against insolvency provided by law are: by the regulation of loans and business activities, by fixing the maximum loan to any one person, by forbidding loans to bank officers or loans of certain kinds, by regulating investments and forbidding certain dangerous forms, by restricting the incurrence

of contingent liabilities by acceptances, indorsements, or guaranties, and by restricting the field of operations to strictly credit transactions. For example, merchandising, real estate, insurance operations, and the like, are usually prohibited to banks.

Objects of Protecting Bank Notes

When bank notes are given special protection, three objects are kept in view:

1. To keep the bank notes of a going or suspended bank at par.
2. To provide that the noteholder shall be secured against loss, at least ultimately.
3. To provide for elasticity of issue.

1. Maintaining Parity

The first of these objects may be attained in several ways.

In Canada, for example, the note of a suspended bank begins to bear interest at 5 per cent from the date of suspension until it is redeemed by the central authorities from a special fund kept for the purpose; the result is that notes of suspended banks may be preferred to notes of solvent banks and be held back as investments, while those of the solvent banks are used in payments.

Voluntary or compulsory subscription to a common fund, in proportion to each bank's issues, may be arranged and placed with the government or a trustee who pays from the fund the notes of suspended banks. This is called the "safety fund system."

Again the state may declare the notes legal tender in all or special cases. Such declaration, like any legal-tender law, by clothing the notes with debt-paying power, tends to maintain their circulation at par.

The best and most general method of keeping bank notes at par is to provide means of immediate and constant convertibility. If the holder can at any time, at his will and with

little trouble, convert his notes into standard money, they will not go below par. Various devices for achieving immediate convertibility have arisen. The issuing bank must ever according to its promise stand ready to convert over its counter, and if this is done anyone within reasonable distance of the bank might regard its notes as good as gold. To provide for redemptions at distant places and thus give the notes parity over a wide area, a system of local and central redemption agencies may be established, particularly at the chief money centers. Another method of redemption for notes of both active and liquidated banks is immediate redemption by a guarantor. In the United States, national bank notes are redeemed by the federal Treasury upon demand, from a fund contributed by the banks and recouped by sale of pledged securities and other assets, the government, at least by implication, thus guaranteeing redemption. The best means of assuring ability to redeem on demand is to require that the issuing bank keep in its vaults, or with some nearby institution, either a fixed amount of gold or an amount bearing a fixed minimum ratio to the notes issued. The federal reserve banks, for instance, are required to hold gold equal to 40 per cent of the federal reserve notes issued.

2. Providing Payment at Par

The second object in protecting bank note holders, namely, to provide ultimate payment at par if immediate conversion proves impossible, is attained in several ways in the different existing banking systems, according to the local or political conditions of each country.

The simplest of these various plans is to give the noteholder no more protection than the depositor and to rely upon the business self-interest of the banker. The theory upon which this method is based is as follows: A bank note is a simple promise on the part of the bank to pay and circulates on the credit of the issuer. This credit is improved if the bank has

adequate sound and liquid assets, for the bank notes together with the deposits are ultimately paid from the *general assets*. Fear of failure and of bankruptcy makes the banker conservative in his investments, hence the self-interest of the banker, as well as the requirements of law and government regulation, is assumed to provide adequate protection to the noteholder. This method of attaining ultimate payment at par, while theoretically sound, has proved delusive and dangerous, particularly in the early history of our state banking. It works best in old districts in which banks, chastened and taught by failures, have assumed a full responsibility for the continuous and conservative financial welfare of the district. It is also less likely to succeed in a decentralized system of note issue, where competing banks act independently and for their own advantage and exercise little or no restraint on a bank which is known to be overextended.

Where it is desired to give more protection to notes than to deposits, the notes may be given a prior lien on the general assets, that is, after the notes have been liquidated at par the depositors are entitled to the remaining assets. It is evident that by the prior lien noteholders are protected at the expense of depositors. The bank note systems of France and Canada illustrate these two schemes respectively.

In general, however, the issuance of bank notes is regulated in the interest of the holders, and these regulations are supposed to provide indirectly for security. The plans for such regulation are numerous.

One method is to restrict the issue to certain banks. The central banks of England, Germany, and France enjoy practical monopolies of issue in their respective countries; these banks are exceptionally strong and are moved by a public interest which does not generally characterize local banks. In England this restriction allocates the issues still more by placing that activity entirely in the hands of the Issue Department, a plan which results in a clear-cut separation of loans and issue, mak-

ing baneful collusion of bank officers, as well as trespasses on the law, less easy and secret.

A second method is to restrict the amount of the aggregate issue. The limit may be absolutely fixed at so many *milliards*, as in France or Germany, or be limited according to the government debt or the issuing bank's capital, as in the United States. The limit fixed may or may not be elastic—the 5 per cent tax on the excess as used in Germany, or the Aldrich-Vreeland Currency Associations formerly used in the United States, illustrates the elastic limit. Indirect limitations may be imposed in various ways, such as by:

1. Allowing only large denominations which will not circulate freely—for instance, the Bank of England note and the national bank note are relatively large denominations.
2. Requiring immediate clearance and redemption, as in Canada.
3. Limiting the area of circulation.
4. Guarding the nature of loans and assets and supervising the banks' practices through legal restraints, regulations, examinations, and reports. These methods of indirect limitation are combined in varying degrees and ways.

A third group of methods of protecting noteholders with ultimate security is to pledge special assets. The segregation of these assets, usually those of better quality than the rest, for the special security of bank notes is made to the detriment of the security for deposits. This partiality is shown to notes because legislatures, for previously mentioned reasons, regard the noteholder as a more immediate ward of the state.

The particular assets set aside for the protection of the noteholders are usually high-quality assets, such as mortgages or government bonds, and are pledged with the government, which

is authorized to sell the bonds and redeem the outstanding notes. Commercial papers, such as notes and acceptances of tradesmen and manufacturers, are very serviceable assets for use as a pledge against notes, because they open a way to procure elasticity.

Another system of affording security is to have a government or other large institution or group of institutions stand guarantor of the notes issued. The security of the notes is then that of both the commercial world and the government or guaranteeing institution. The best example of this system is our national bank system, for the notes of which our federal Treasury stands practical guarantor.

3. Elasticity of Note Issues

The great danger in any system of protection of note issues is that the restrictions may be so rigid as to destroy or unduly circumscribe elasticity of issue. A note issue should be capable of expanding suddenly and greatly in case of emergency, and of contracting as readily when the emergency subsides. It should also be able to increase and decrease with the seasonal demands for money. The term "elasticity" is strictly applicable to the latter case only. Elasticity of the currency is desirable so that:

1. Accommodation, particularly to deserving and efficient borrowers, can be extended freely and the continuity of business maintained.
2. The market rate of interest may be stabilized and fluctuations of credit reduced.
3. The quantity of money rather than the price level may fluctuate seasonally.

It is highly desirable that an expansion or contraction of the volume of bank notes should be unmistakably in response, respectively, to an increased or lessened demand of the legitimate business world—a demand not based, except to a relatively small degree, on speculative operations but on actual industrial and

commercial operations. This correlation may be most surely achieved by issuing bank notes only to borrowers who use the funds only for such legitimate purposes. In practice the persons who decide whether the purpose alleged is legitimate, and who watch to see that the loans are used for the alleged purpose, are the loaning bankers.

Methods of Attaining Elasticity

One method for bringing about the desired correlation between the expansion or contraction of the volume of bank notes and the increased or lessened demand of the business world is to allocate the issue function to a central body and require the pledge of strictly defined commercial paper, bearing evidence of its commercial origin and use, as the basis of notes issued. If the quantity of such eligible paper increases in response to seasonal development of trade, more may be pledged as security for bank note issues. When business again slumps, the payment of the commercial paper will recall the bank notes.

It is evident that such seasonal responsiveness is defeated if the volume of bank notes depends upon long-term investments instead of self-liquidating paper, for there is no assurance that the funds are being used for the alleged original purpose, or, having been so used, that they are not being used in subsequent illegitimate operations. Moreover the loaning bank, feeling amply secured and perhaps therefore indifferent as to the uses to which the loan is put, may freely renew the loan until it becomes practically a continuous loan; the request for renewal would never have been made, however, if the loan had been self-liquidating. The ideal collateral for bank note issues is, therefore, strictly self-liquidating commercial and industrial paper of short usance.

It is not impossible, of course, to effect elasticity, even though the bank notes are secured by pledge of stocks and bonds or other permanent investments, provided bankers assure themselves that the funds are used in short-term commercial and industrial ways

and that they are withdrawn from circulation when those uses have ceased. In fact, it may be very desirable to issue bank notes freely upon the basis of promissory notes secured by pledge of bonds and other investment securities. In the United States during the late war, the great disturbances of the money market occasioned by war financing were very much alleviated by the legal possibility of rediscounting such war paper and procuring in this way federal reserve notes or credit with the federal reserve banks. In this case the need for currency was oftentimes too suddenly and too greatly increased to place dependence upon pledging strictly commercial paper, the volume being too small or too constant, and it was expedient, therefore, to provide for direct loans by the federal reserve banks against government securities. or for rediscounting war paper given to member banks by loan subscribers.

If no limitations are laid by law on credit issues, the bankers will of their own accord normally provide elastic note issues and elastic deposit currency. The needs of the business world will be indicated by the aggregate of applications for loans and by the rates of interest that borrowers are willing to pay. As loans and discounts expand, deposits and note issues will expand in proportion; and subsequently, when business men sell their stores of goods or realize upon their customers' accounts, the loans at the bank will be lifted, the deposits canceled, and the notes retired. If the state requires a minimum percentage reserve in gold against notes or deposits, or both, it is evident that a maximum for the issue is fixed by the gold in the bank's reserves. If the state goes further and allows issues only against certain assets specifically pledged, a more rigid limit is put on the issue and, as in the case of our national bank note, all elasticity may be forfeited. The federal reserve system has a plan for pledging commercial papers as collateral for notes which achieves elasticity of issue.

Elasticity cannot be attained simply by providing a means of expanding the issue; it must also provide for contracting the issue

by redemption when the exigency has passed. If a banker might issue his own notes freely, self-interest would incline him to withdraw from circulation the notes of other banks and fill their place with his own; if he could not use them for reserves nor pay them out over his counter, they would be idle funds in his hands and he would send them for redemption at once. If a loan were paid with bank notes of the loaning bank, the notes in circulation would contract by that amount; if it were paid with bank notes of another bank and the loaning bank were to send those notes immediately to the issuing bank for redemption, the circulation would be likewise reduced; under such conditions, checks and bank notes would be cleared at once and together. This is the situation in Canada.

It is to be noted that the restrictions which defeat elasticity of bank notes may not defeat elasticity of the country's aggregate currency; elasticity may be secured through issue of government paper money or by deposit currency. England, for example, has a very inelastic bank note system, but its deposits expand and contract freely to conform with business needs. If the deposit-check system is thoroughly understood throughout the country, there is relatively little need of an elastic note issue. In actual practice, however, large industrial classes, such as wage-earners, and large geographical areas, such as the agricultural South and Northwest of our own country, find checks inconvenient, and the seasonal demands for means of payment are best met by an elastic note issue. As deposit banking permeates the United States the evils of the inelastic national bank note are reduced.

Existing Systems of Protecting Bank Notes

Differences of historical, political, and economic nature in the leading commercial countries of the world have resulted in various adaptations of the methods of protecting bank notes, as given in the foregoing section. These adaptations may be briefly summarized as follows.

Bank Notes in France

The Bank of France has a monopoly of the note issue privilege. The notes are a legal tender for all debts. They are secured by the general assets of the bank, but they are not given a prior lien on these assets. The law does not compel the bank to keep any specific reserve, but the bank has been conservative and has accumulated a large specie reserve of gold and silver. Besides its specie reserve the bank's assets normally contain large quantities of prime commercial paper. The issue of bank notes takes place ordinarily through the rediscounting of two-name paper, in large part of small denominations, to which the banking house that sells the paper adds a third name. The war had the effect of loading the assets with government securities. From time to time the government fixes a maximum figure for the circulation of these notes, but as the figure is usually raised in advance of needs, this is not a real restraint. While the bank may redeem in either gold or silver, a stubborn refusal to pay gold would create adverse public sentiment; the bank, accordingly, offers to make gold payments at a premium in currency when such concession seems advisable, and in this way it controls the exportation of gold and protects its reserves. The deposit business in France is very small indeed, but elasticity of both notes and deposits is well attained.

Bank Notes in England

The Bank of England, to which the note issue privilege surrendered by other banks accrued under the Bank Act of 1844, the "Peel Act," has a practical monopoly of the bank note issue in England. The English bank note system is based on the currency principle. To the amount of £18.45 million the issue is secured by government and other securities, this portion of the issue being called the "uncovered" issue. All in excess of that amount is secured pound for pound with gold.

The Bank of England is divided into two distinct parts—the

Issue Department and the Banking Department. The Issue Department is charged with the sole and exclusive function of the issue and redemption of bank notes; the Banking Department handles discounts, loans, and deposits. The Banking Department procures notes from the Issue Department in the same way as does any holder of coin or bullion, that is, by the exchange of gold for notes. In making loans the Banking Department generally credits the borrower with deposits, but it may pay out notes or gold; the same is true of any payment by the Banking Department. A large part of the outstanding bank notes are found in the vaults of the Banking Department and constitute a portion of its reserves; they simply represent so much gold kept in the Issue Department.

Bank notes of the Bank of England may be used as reserve by the other banks whose reserves consist of "Cash and Due from the Bank of England." The "Cash" includes many notes of the Bank of England, and the portion described as "Due from the Bank of England" consists largely of balances carried with the Bank of England by the local bank.

The uncovered issue of the Bank of England is fixed in amount, but the covered issue, which consists really of certificates of deposit, can expand indefinitely. With every increase of the covered issue, the per cent reserve against the total issue is increased. As a result the bank notes are absolutely safe but wholly inelastic; to increase the total volume of the country's currency by the method of note issue is impossible, since gold is simply exchanged for an equal amount of bank notes. In financial crises the system breaks down; five times it has been found necessary to disregard the legal limitations on the uncovered issue. On such occasions Parliament suspends the Law of 1844 and so enables the Banking Department to carry to the Issue Department more government securities in exchange for bank notes. These suspensions are temporary, and as soon as the crisis is passed the Banking Department recovers its securities by paying

bank notes. Because of the limitations on bank note issue and because of the greater utility of deposits, deposit banking largely supplants note issue in England.

Bank Notes in Germany

The monopoly of note issue in Germany is conferred by law upon the Reichsbank and four other joint-stock banks; in case of the surrender of the note-issuing power by any of the four the privilege accrues to the Reichsbank. By the Law of 1909 the maximum limit of the uncovered issue was fixed at 550,000,000 marks, with the provision that for the last week of each fiscal quarter, when the volume of payments runs high, the limit is 750,000,000. The uncovered issue is based upon commercial paper in the Reichsbank's portfolio; during the war, indeed, treasury certificates of indebtedness were declared to be eligible cover. No limit is set for the total issue of bank notes, but any amount in excess of the legal limit of the covered issue must be secured by an equal amount of cash, and any excess not so secured by cash is subject to a tax of 5 per cent per annum. During the war the Darlehnkassenscheine (a special form of currency issued by loan societies upon the security of bonds, stocks, and so forth) were declared by law to be "cash" and eligible cover for bank notes. Of course, the pyramiding of notes made possible by these provisions promoted inflation of the German currency.

The 5 per cent "elastic limit" device, which is a less awkward method of permitting emergency issue than the English system of suspending the Bank Act, has been resorted to quite frequently. The frequency of its use has, in fact, been the occasion of fixing a higher amount for the uncovered issue. In practice the Reichsbank has not been influenced greatly by the 5 per cent tax; it has often paid the tax, loaned the notes at 3 or 4 per cent, and borne the loss, when financial exigencies or public responsibilities seemed to warrant. Under present practices, therefore, there are no great reasons for retaining the tax, since the volume of notes

depends rather upon the will of the bank administrators than upon money rates. In former times the tax probably served a useful function as a danger signal.

The cash in the vaults of the note-issuing German banks consists of gold and silver coins, gold bullion, imperial treasury notes, Darlehnkassenscheine, and notes of other banks. The law requires that the cash held exclusive of the notes of other banks be equal in any case to at least one-third of the total circulation, and that notes not covered by cash be covered by discounted commercial paper having not more than three months to run until maturity and bearing three indorsements or not less than two names of well-known solvency. Neither the cash nor the commercial paper is specifically pledged, however, against the notes, for both remain in the general fund and portfolio of the issuing bank; nor are the noteholders given any special lien on these assets. The system simply means that the assets on which the issue of notes is based consist of cash and very liquid commercial paper.

The issue of notes for gold is purely a matter of convenience to the holder; it helps to provide a large gold reserve but no elasticity is achieved. The issue of notes for rediscounted paper, however, within the limit of the uncovered issue, provides an elastic note system, and the device of the 5 per cent elastic limit allows for emergency issues. The Reichsbank before the war carried a large reserve of gold and silver. The government required the issuing bank to keep its notes strictly convertible, redeeming them over its counter. The four issuing banks, other than the Reichsbank, were required to maintain redemption offices at Berlin and Frankfort; the Reichsbank redeems its notes also at its branches. The bank notes are a lawful tender to any other bank of issue and must be received at par, and notes thus received must be presented for redemption or be used in payments to the issuing bank or in the issuing bank's home city. Since 1909 the Reichsbank notes have been a full legal tender.

PUBLIC LIBRARY
OF THE CITY OF
COLORADO SPRINGS

Altogether the issue of bank notes in Germany has been a very important side of banking, for deposit banking has until recently developed but little.

Bank Notes of Canada

The Canadian banking system consists of 19 banking corporations, with 4,000 branch offices, including 124 branches outside of Canada. These 19 banks are empowered to issue notes at their main offices and through their branches. The banking system is characterized by a great freedom from legislative interference. The notes are secured by the general assets of the bank, and the noteholders are given a prior lien. Each bank is permitted to issue notes up to the amount of its unimpaired paid-up capital. There has been little practical reason for such limitation, for the circulation hardly ever exceeds 60 per cent of the paid-up capital; the limitation does, however, force the banks, as their volume of notes expands, to pay in more of their capitalization, and these contributions of the stockholders increase the security of the creditors. At times when the note circulation of a bank approaches its limit, say, 90 per cent of its capitalization, that bank tells its branches to cease giving out notes. When it reaches the limit, it uses the notes of other banks, paying them out over its counter, and to get such notes it borrows from banks which have not reached their limit.

A bank during crop-moving season (from March to August, inclusive) may issue notes in excess of paid-up capital to an amount equal to 15 per cent of its combined paid-up capital and surplus. This emergency issue is subject to a tax of 5 per cent or less per annum, the rate being fixed by the governor in council. These emergency notes are of the same quality, style, and denominations as the ordinary notes.

By an Act of 1913 provision was made for what are called "reserve" notes. Beyond the limits set forth above the bank may issue any amount of notes it desires, provided it deposits

with the board of trustees at Montreal gold or Dominion notes to the full amount of notes issued in excess of the limits. These notes and the ordinary bank notes are identical in form, and on the issue thus covered by gold and Dominion notes there is no tax. The banks send their idle reserve gold to Montreal to cover such new notes, and this gold may be recalled when it is no longer needed for that purpose.

The smallest denomination of bank note is $5, and all the notes are multiples of $5. The Dominion notes are $1 and $2 notes issued by the government to an amount of $30,000,000, against which it keeps a 25 per cent gold reserve; any amount in excess of these $30,000,000 may be issued upon deposit of gold for the full amount. The Dominion notes are therefore somewhat like our greenbacks and gold certificates, but it is obvious that bank notes, because of their larger denominations, cannot displace the Dominion notes in circulation, nor vice versa; they are not competitive.

The law of Canada does not require any specific per cent reserve against the bank notes, but does require that at least 40 per cent of the reserve consist of Dominion notes. An opinion has grown up in Canada that a reserve of not less than 15 per cent of demand liabilities should be held in gold and Dominion notes, and if a bank falls below this percentage it is admonished by the Canadian Bankers' Association. By law bank notes are redeemable in specie, but banks in making ordinary payments are required to pay amounts up to $100 in Dominion notes if the payee requests it.

In order to effect uniformity and to prevent fraudulent issue, in 1900 the Canadian Bankers' Association was by law given power to regulate the making and issue of bank notes, to report to the government all overissues, to care for the destruction of worn and mutilated notes, and to take charge of suspended banks. Its main office, in charge of a Secretary, is at Ottawa. The worn and mutilated notes are sent to the Secretary and destroyed in

the presence of witnesses, and new notes issued to replace them. The bank note printing companies report to the Secretary monthly the amounts of notes issued to the respective banks, and the Secretary compares these with similar statements from the banks as to notes received. The system is not so highly centralized as our national bank note issue is in the hands of the Comptroller of the Currency.

It remains to add that in Canada bank notes are not legal tender, nor are banks obliged to receive the notes of other banks.

A unique feature in the Canadian bank note system is the bank circulation redemption fund, or safety fund. Started in 1890, the fund was raised by contributions from the banks to an amount equal to 5 per cent of the average circulation of each contributing bank. The fund consists of gold and Dominion notes, lodged in the hands of the Minister of Finance, and bears interest at 3 per cent per annum. The sole object of the fund is to make payment of the notes of banks that have failed; the notes of such a bank are redeemed from the fund without regard to the amount which that bank may have paid into the fund. If the amount of redemptions plus interest on redeemed notes exceeds the sum it contributed, the other banks are required to make good the excess; the Minister of Finance assesses this excess upon the other banks, but the assessments in any year may not exceed 1 per cent of their circulation. All such assessments are reimbursed to the banks when they are recovered from the assets of the failed bank, on which assets the notes are a prior claim. The fund serves the purpose of a compulsory mutual insurance of bank note issues, in which the banks have an intense interest as to the right conduct of their sister banks.

The notes of failed banks bear interest at 5 per cent per annum from the date of suspension to the date announced for payment. Such notes are regarded, therefore, as 5 per cent investments to the date of redemption, and the notes of these banks may be actually more valuable than the notes of solvent banks. The

holders have, at least, no difficulty in selling them at par to other banks, brokers, or persons having money for temporary investment. Instead of protractedly circulating at a depreciated value, the investment quality of these notes keeps them at par and withdraws them from circulation.

Every bank is required to redeem its notes at its head office and in such commercial centers as are designated by the Treasury Board. At present the redemption cities for all the banks in common are Toronto, Montreal, Halifax, Winnipeg, Victoria, St. John, and Charlottetown. The many redemption offices make it easy to redeem the notes, the distances are short, and there is no charge for exchange.

Banks issue notes freely, both at the home office and the branches, as loans and discounts are made; such loans and discounts are paid in bank notes or credited as deposits; when these loans are repaid later the means of payment are five in number, viz.:

1. Gold or Dominion notes—these increase the bank's reserve and decrease the total currency of the country.
2. Checks against the loaning bank—these leave the notes outstanding at the same amount, but reduce its deposit liabilities.
3. Checks against other banks—these are cleared and collected.
4. Bank notes of the loaning bank—these reduce its bank note liabilities and the total bank note currency of the country.
5. Bank notes of other banks—these are sent at once to the redemption offices or to the issuing bank for redemption, or if the head office or a branch of the issuing bank is in the same town as the loaning bank, the notes are enclosed along with the checks in the exchanges for the clearing house, for, although branches are not required to redeem notes of the parent bank, they are required to accept them at par in payment of all dues.

Every bank strives to put out into circulation its own notes, but at the same time to bring about the redemption of the notes of all other banks when tendered in payments or for deposit. The branches facilitate the bank note system by providing facilities for maintaining upplies of notes handy to borrowers. Though the bank notes acquire a national circulation, they do not stay out in circulation but are speedily returned for redemption. The result is an alm st perfect elasticity of note issue; the curve of the combined outstanding issues is highly symmetrical from year to year, the fluctuations ranging between 15 and 20 per cent, the maximum issue coming in October, the minimum in January. The spring revival calls out some extra notes, but the big issues start in August and decline in November.

Bank Notes in the United States

These include national bank notes, federal reserve bank notes, and federal reserve notes, and will be described in Volume II, Chapter XIX.

CHAPTER VIII

PROTECTION OF DEPOSITORS

Special Protection in the United States

For reasons presented in the preceding chapter, the state has not been as solicitous for the protection of depositors as it has for the protection of noteholders. Indeed, much of the protection to noteholders has been given to the direct detriment of the depositors. For instance, the segregation of some of the best assets of the bank (government bonds, prime commercial paper, gold, etc.) as specific security for outstanding bank notes, weakens the security for the deposits; giving noteholders a first and paramount lien on the assets of a failed bank has the same effect.

In countries other than the United States and the Netherlands, the protection provided for depositors by law has been only such as is provided for creditors of the bank in general—that is, such protection as comes by limitations on the loans and investments and business activities of the bank, by periodic examinations and careful supervision of the banks by a state or federal banking department, by prohibition of interlocking directorates, and so forth. As the volume of deposit business in the Netherlands is small, absolutely and relatively to the note issues, the United States may be said to stand alone among the deposit-banking countries in its efforts to give special protection to depositors.

Provision for Protection

Two methods of protection are provided in the United States. Both the federal and state laws require minimum percentage reserves to be held against deposits. Since the state and national banks are competitors, the state reserve requirements do not

exceed, and are usually equal to or less than, the federal requirements, but the plans are similar. The minimum percentage reserve requirements under the National Bank Act and under the Federal Reserve Act, with amendments, along with the good and bad features of the system, are treated in Volume II, Chapters XXI and XXII.

Another method is in use in the states of Oklahoma, Kansas, Nebraska, Texas, Mississippi, South Dakota, and Washington, where provision is made for the compulsory or voluntary insurance, or "guaranty," of deposits.

Methods of Guaranteeing Deposits

In periods of depression and panic in the Middle West, high losses by bank depositors have occasioned legislative movements for their protection. Out of the panic of 1907 arose various plans for the guaranty of deposits, and in 1908 Oklahoma enacted a compulsory system of mutual guaranty, which was followed by guaranty legislation in the Dakotas, Nebraska, Kansas, Texas, Mississippi, and Washington. The plans so far tried are four in number:

1. Voluntary state-supervised associations of banks which collectively guarantee the deposits of the members and pay the depositors of a failed member out of a fund subscribed to by the members in proportion to their average guaranteed deposits.
2. State-wide compulsory systems requiring all state banks to pay regular and occasionally extra assessments, determined by the amount of defaulted deposits and proportional to the average guaranteed deposits of the assessed banks.
3. Systems permitting or requiring state banks to form associations without state supervision and mutually guaranteeing their depositors.

4. A system whereby some insurance or casualty company enters into contracts with the several banks to insure the depositors of those banks against loss; the premium paid by such banks to the insuring company varying, of course, with the respective bank according to the factors of risk, such as management, policy, location, financial record, and so forth. For the most part deposits are a bad form of risk, are not actuarially predictable, and require too constant supervision by the insuring company. Only two companies are known to the author that handle such insurance at present. This form of guaranty is entirely independent of state action.

Safety Fund Plan

The first application of the safety fund plan to protect deposits was in the form of a bank law in New York State in 1829, though the apparent intention of the legislature was to guarantee notes only. After a near failure of the scheme, because of the inadequacy of the fund to protect both notes and deposits, its application to deposits was abandoned in 1837. The heavy bank failures during the depression after the panic of 1893 injected into the more general Populist movement of the mid-west states a demand for the guaranty of deposits. Only the returning prosperity after 1898 stemmed the inauguration of the system in Kansas and Nebraska at that time.

The next demand for guaranty of deposits was occasioned by the panic of 1907, which broke October 22. When Oklahoma became a state on November 16, 1907, an effort was made to put deposit guaranty into the Oklahoma constitution, but the attempt was killed in committee. On December 17, however, the bank guaranty law, to go into effect in sixty days, was passed as the second act of the first legislature. The frontier is "preeminently the land of sanguine radicalism and experimental legislation," and more subject to what Brice has called "legisla-

tive temerity" and extreme "confidence in the power of the state" than the older and more conservative states. The idea of guaranteeing deposits proved very popular and was at once seized upon by the political parties as political capital. It was adopted by the Democratic Convention at Denver, in 1908, as a plank in the national platform, and in Kansas the same year the Republicans bolted their own national platform and declared for deposit guaranty. In 1909, deposit guaranty laws were passed alike in Kansas and North Dakota, Republican states, and in Texas and Nebraska, Democratic states. The political nature and execution of the laws have been to a large degree responsible for the poor working of the plan.

The Oklahoma System

By the Act of December 17, depositors of defaulting Oklahoma banks were to be paid at once; and to provide a fund in advance to meet such contingent payments, assessments were levied against all state banks and trust companies equal to 1 per cent of their average daily deposits. This fund, when depleted by payments, was to be repleted by special assessments to which no limit was set. By the amendment of 1909 the fund was fixed at 5 per cent of the average daily deposits and was to be gradually accumulated by contributions of ½ per cent per year. In 1913 the extra assessments in any one year were limited to 2 per cent.

The present status of the law is that the annual assessment shall be ⅕ per cent of the average daily deposits and no more. Extra assessments were abolished in 1916. In case the fund proves insufficient at any time to meet the losses, the unsatisfied depositors are given certificates of indebtedness bearing 6 per cent interest, or the certificates are sold on the market and the proceeds used to pay depositors. These certificates are called and paid as soon as the legal annual assessments recoup the guaranty fund. They are a first lien against the assets of each bank operating under the law to the extent of the bank's liability to

the guaranty fund, and are exempted from state and local taxes. They are considered a good investment and have found a ready market. Since 1909, 75 per cent of the fund may be invested in state warrants and similar securities, the remainder being held by the State Banking Board. Banks may pay their assessments by non-interest-bearing cashier's checks, and these checks may be held by the board until the funds are needed, thus giving the contributing bank use of the funds until really wanted by the board.

To secure its liability to the fund, the bank is required to deposit collateral securities equal to 1 per cent of its deposits. The State Banking Board, which handles this fund as well as the general supervision of the banks, was at first composed wholly of political appointees; but in 1913 the banks succeeded in getting control of appointments to the board to the extent that three of its five members are now chosen from a list recommended by the State Bankers' Association. When a bank defaults, the State Bank Commissioner takes charge and determines whether it is solvent or not; if he finds it insolvent he liquidates it. Depositors are paid from the available cash and from the guaranty fund; the proceeds from the liquidation are paid into the fund, but if insufficient to replete it, certificates of indebtedness are issued to the unsatisfied depositors or are sold to the public at large for funds to pay depositors. Deposits that are otherwise secured are not guaranteed, nor are deposits guaranteed on which a greater rate of interest is paid than that fixed by the Bank Commissioner (4 per cent in 1918), nor are deposits of trust companies protected any longer.

Unfavorable Conditions in Oklahoma

For certain reasons, conditions have not been favorable for experimentation with deposit guaranty in Oklahoma. For one thing, despite the fact that the banks of Indian Territory, which became part of Oklahoma upon its admission to statehood, had

never had state supervision, and those of Oklahoma Territory not perfect supervision, they were forced into the guarantee system with a very superficial examination as to their solvency and practices. Political expediency rather than financial fitness weighed too heavily as credentials for entering. The risks were, therefore, not selected with caution from the very first.

Then, too, national banks, although permitted to join by terms of the law, were denied the right to join by opinion of the Comptroller of the Currency and the Attorney-General, on several counts. To enter the system, therefore, national banks had to surrender their national charters and become state banks. This was expensive and bothersome and was done reluctantly. The large banks were national banks and were in the larger cities; the state banks were of varying sizes and more scattered. The law, therefore, affected areas differently.

In addition, and almost inevitably, the law at once became the football and tool of political parties. To make the law work successfully, high-handed methods were resorted to and criminal bank officials were left unpunished. The evils from its political administration were much reduced, however, when in 1913 the State Bankers' Association secured representation on the State Banking Board.

The law was hastily drawn, without precedent to guide, and enacted by a new legislature, in a new state, without debate, and put into operation in an unduly short time—all in the midst of a financial panic when judgment was warped by public clamor. The result was a poor law, difficult of execution, and requiring many amendments.

The state had been and was in the throes of speculation and bank officials were active in speculative ventures; the real estate boom and the oil boom were led or facilitated by the bankers. Bank credit was unduly extended on tenuous security. The state was new, was growing at unprecedented rates into great agricultural, oil, and lumber wealth. Speculation, venturesomeness, and

dishonesty were rampant; banks do best when nurtured in a more conservative soil. Bank morals were very lax.

There was a high concentration of risks. The guaranty system was in operation in only a single state, which outside its oil production was almost wholly agricultural, and as a result a crop failure such as fell upon the state in 1911 shook the banking structure with great severity. Besides, there was a great concentration of bank credit in Oklahoma City. Had the guaranty system been nation-wide there would have been prosperous states, areas, and industries to compensate for the defaulting states, areas, and industries, and the financial world would have had a more even tenor.

Popularity of the System

The Oklahoma system was from the first very popular. Until 1911, the state banks increased fast in number and deposits, while the national banks declined in number and increased their deposits but slightly. The crop failure of 1911, however, precipitated a financial crash; the speculative boom collapsed and dragged many banks into insolvency. The assessments to provide and maintain the guaranty fund became very onerous. Reduced to a percentage of the average capitalization of the banks for these years, the guaranty system cost the banks rather more than 3 per cent annually. The heavy burden in 1911 and 1912 led to the desire for escape from the guaranty system, an escape which nationalization offered to those banks that had sufficient capitalization. Hence practically all the larger banks and those in the large cities became national banks, leaving within the guaranty system only those banks that had too small a capitalization to become national banks.

The Kansas System

Owing to the general popularity of deposit guaranty, and particularly to the pressure brought by banks of Kansas near the

Oklahoma line, which felt a migration of deposits to the guaranteed Oklahoma banks, the Kansas legislature (Republican) in 1909 enacted a guaranty law. Some of the salient features of the Kansas plan are these.

The system is voluntary; any incorporated bank, a year old and having a 10 per cent surplus paid up and unimpaired, may join, but before admission it is subjected to a rigid examination by the State Bank Commissioner, and as evidence of good faith it is required to deposit $500 in cash or in national, state, or municipal bonds for every $100,000 of deposits. The state does not attempt to pay depositors cash immediately upon default of the bank, but issues certificates of indebtedness bearing 6 per cent interest. It then liquidates the bank and applies the proceeds in payment of the outstanding certificates. These certificates are regarded as a good investment and are particularly sought after by the banks as a means of getting new customers.

Provision is made for contributions to a fund large enough to cover the ultimate losses, for immediate payment of deposits is not made. The law fixes the annual assessment at $\frac{1}{20}$ per cent of the average daily deposits, less capital stock and surplus; this exemption fosters higher capitalization and the accumulation of surplus. These annual assessments continue until the fund reaches $500,000, when they cease. Thereafter special assessments of $\frac{1}{20}$ per cent may be made to replenish the fund when it is depleted by payment of losses—not more than five such assessments, however, being made in any one year. The fund is held by the State Treasurer. Any bank is permitted to withdraw at will, but it must pay its quota of the assessments to cover losses occurring within the succeeding six months.

Strength of Kansas System

The Kansas law has many elements of strength not found in the original Oklahoma law. The chief advantages are the following:

1. Undue expansion of deposits is checked by limiting them to ten times the capital of the bank.
2. The rate of interest paid on deposits guaranteed by the system is limited.
3. Banks are prohibited from advertising that their deposits are protected by the state.
4. Entering banks are rigidly examined.
5. Banks must be a year old and have accumulated a 10 per cent surplus.
6. The accumulation of surplus and the contribution of a large capital are encouraged.
7. The Bank Commissioner has power to remove incompetent, reckless, or dishonest bank officials.
8. The maximum time allowed a bank to correct any abuses the Bank Commissioner orders corrected is thirty days.
9. The amount of the assessment is low and is strictly limited.
10. The law is supplemented by a better, older, and more exacting system of bank supervision than existed in Oklahoma.

The Kansas act went into effect June 30, 1909. Since then the number of guaranteed banks has increased gradually, and on June 30, 1916, was 539 to 448 non-guaranteed. On that date the guaranteed banks had about twice the deposits of the non-guaranteed, the larger banks having joined and the newer and smaller banks being excluded by the requirement of a 10 per cent surplus. Only one guaranteed bank had failed to date, and this failure was due to reasons other than the existence of the guaranty law. In March, 1921, the number of banks operating under the guaranty law had reached 694 out of a total of 1,107 state banks.

The state banks of Kansas having adopted guaranty of deposits, the national banks of that state were constrained to meet the competition. Since they were denied the right to join the Kansas system, they organized in 1909 the Kansas Bankers'

Deposit Guaranty and Surety Company. This company, capitalized at $500,000, is owned by bank officers of the national banks and those state banks that did not join the Kansas system. Its head office is at Topeka. It issues policies to each member bank guaranteeing the deposits in case of bank failure; the premium rates are 50 cents per thousand dollars of deposits up to the amount of the capital and surplus, and $1 per thousand dollars of deposits in excess of capital and surplus. About a hundred banks took out policies. As there have been no losses, the demand for guaranty has declined, and many of the banks have let their policies lapse. The company now does a bonding, surety, and guaranty business in several lines.

Arguments for Guaranty of Deposits

Argument in favor of guaranteeing deposits has been on political, moral, social, and economic grounds. The political (largely partizan) arguments may be waived, except to remark that if deposit guaranty brings greater economic and financial and therefore political stability it may be very desirable in our country, where things economic and financial unfortunately are only too often turned to bad uses by politicians. The moral obligation of a banker to pay depositors is unquestioned, but the standing policy of our bankrupt laws is to excuse the legal obligation under certain warrantable conditions; the guaranty of creditors of a banker by the state must rest, therefore, on exceptional reasons.

One such argument frequently used in favor of guaranteeing deposits is that banks are created (chartered) by the state and entrusted with great public functions, such as the issue of currency and the keeping and transfer of public funds, and that the state, in consequence of its rigid supervision of banks, clothes them with a fictitious credit and by implication warrants the public against abuse of bank credit extensions. In contravention of this argument for particularizing the guaranty of bank credi-

tors, it may be said that government supervision does not necessarily imply a guaranty of the credit of the supervised institution, a fact which the public may be presumed to know. Moreover all corporations—not banks alone—are created by the state, and many corporations other than banks are clothed with that credit which springs from government supervision, and are endowed with such powers as make them public utilities. Furthermore the government itself takes precautions to guard any funds it may place with the banks.

On the other hand, there is in all probability no corporate activity whose soundness and stability so permeate and affect the financial, economic, and social situation as does banking. A panic halts everything and brings about unrest; and because deposit credit is so important in our national life, because government supervisors and examiners cannot fully guard against fraud, dishonesty, and poor judgment of bankers, and because depositors lack ability to pick sound banks or place their funds elsewhere and are helpless to protect themselves, the state may be justified in going further than simply to supervise; it may actually guarantee the deposits.

Effect of Guaranty on Panics

The degree of stability that can be achieved by deposit guaranty applies to runs on banks rather than to financial crises. Crises depend upon more comprehensive causes than the confidence of depositors in their banks, and are brought about by such means as cyclical industrial movements, wars, earthquakes, rainfall, and so forth. Yet a favorite argument for deposit guaranty has been the prevention of panics. Panics are precipitated by want of bank "accommodation"; loans on which the maintenance of existing business or the completion of projected business depend, cannot be secured. Against such a situation, deposit guaranty offers no protection. If a bank has reached its legal limit of loans, the guaranty of deposits does not remove

that limit. In fact, as will appear below, the deposit guaranty may cause overexpansion and speculation, and promote the development of industrial and financial panics. It does, however, prevent runs on banks, or at least make them less panicky, and may, therefore, prevent the closing of sound banks by runs and in this way add to the general credit stability.

Some of the most remarkable failures of guaranteed banks in Oklahoma scarcely disturbed the general business confidence. Depositors were quite indifferent about getting their deposits before the bank closed, and those withdrawn were immediately redeposited in other banks in the same city. Where deposit guaranty is in effect, the ordinary confusion and rush attending a bank failure are absent, for the depositors know that their deposits are safe and that no advantage is gained by hurried demand on the bank.

Guaranty of Savings Deposits and Commercial Deposits

Many of the arguments for deposit guaranty start from the point of guaranteeing deposits that originate through the deposit of actual cash or cash items, that is, primarily savings deposits, and pass by confused steps to guaranteeing all deposits. It is alleged that vast funds are now hoarded by people suspicious of banks and that these funds would be put into banks if deposits were guaranteed. If the argument is one of safety it is answered by the postal savings banks and the war savings stamps. Some eccentric persons or foreigners may be influenced by guaranteeing deposits, but the increase of deposits from this source would probably be small. The argument applies primarily to savings deposits, and in general deposit guaranty, as operating in the several states, applies only to commercial deposits. The repeated proposal of the Comptroller of the Currency to guarantee deposits of every depositor up to $5,000 also springs from the desire to prevent individual distress among the small depositors of savings.

Effect of Guaranty on Banks

The sponsors of deposit guaranty maintain that banks ultimately pay dearly for all losses to depositors, because failure causes such discredit and suspicion and consequent falling off in business, that in one year banks lose more than it would cost to maintain a safety fund for many years. These losses come to banks that are prudently managed as well as to those under suspicion. To protect bank deposits in 1914–1915, clearing house loan certificates costing 6 per cent interest or more were taken out, and the government made nearly $3,000,000 on the emergency currency issued; at present the rediscount rate is somewhat of the same nature. It cannot be assumed, however, that these costs would be wholly, if at all, obviated by deposit guaranty.

Bankers maintain that the additional earnings from increased deposits and business would not be nearly enough to sustain the burden of deposit guaranty, and that the actual losses to depositors from bank failures are too small to warrant so drastic a remedy. The losses of national bank depositors from 1881 to 1917 were $77.5 million, and the average percentage of losses of depositors to total deposits each year for that period was .023 per cent. The losses for 1917 were $369,000 out of total deposits of $12,769 million. Were failures not concentrated in certain years and often in limited localities, the answer that the losses after all are inconsiderable and do not warrant the expense of maintaining a guaranty fund, would suffice. It is the individual distress of an unwitting depositor, however, that calls for help.

Probably the most telling argument brought against deposit guaranty is that it puts all bankers on the same level, making the deposits in new, inexperienced, reckless, or dishonest banks as safe as deposits in old, proved, conservative, and honest banks; removing all incentive for developing good-will and reputation for sound banking and for accumulation of substantial surpluses; making liberality in extension of loans and payment of interest on deposits the chief inducements to depositors; taxing good,

competent, experienced, trained, and conservative bankers in order to pay the losses wrought by the incompetent, inexperienced, untrained, and reckless bankers; giving the unscrupulous and reckless banker the competitive advantage and thereby lowering the personnel of the banking world; and, finally, stimulating the establishment of new, small, and speculative banks since they (at least in Oklahoma) are as safe as the old, well-established institutions.

This argument is largely personal and is offered by the older, better, bigger banks, which naturally do not wish to be put on a level with the other institutions. It ignores the point of view of society, which rises above personal advantages and weighs deposit guaranty as to its net balance for good or evil in society as a whole.

This argument is also much weakened by comparison with the actual facts of deposit guaranty. Depositors have small knowledge and ability to pick the safest banks, and rely largely on government supervision; bank supervision tends to reduce bankers to the same level, and the more severe the supervision the more nearly do they approach the same level. In Oklahoma, where deposit guaranty is in operation, the large majority of deposits are in non-guaranteed banks. In Kansas, which also has deposit guaranty, the banks find little reason for guaranteeing deposits in order to get or hold accounts. The banks are, not in fact, therefore reduced to the same level, and the banker's reputation still counts. Most depositors are at some time or other borrowers at their banks, and they deposit, therefore, where they are best known, with the idea of having a dependable line of accommodation.

It is likewise difficult to show that the actual effect of a guaranty law has been to lower the banking personnel; if the bank supervision is made stringent enough under the law, reckless and fraudulent banking will not develop, and it may raise rather than lower the banking personnel. In fact, an objection often raised

against deposit guaranty is that there is a real or supposed necessity of accompanying the establishment of the guaranty system with the grant of almost absolute power to the state banking departments. In Canada and England, where note issue is free, the banks bring pressure to bear on any bank which extends credit dangerously, the Canadian Bankers' Association, by notifying an offending bank that it is issuing notes too freely, the London banks, by discriminating against the acceptances of an overextended institution. It may be that in time the guaranteed banks will undertake such a mutual guardianship, but up to the present time, far from exercising a constant surveillance over each other, they are only too prone to overlook reckless and criminal banking. Where deposit guaranty is in operation government officials, for political reasons, often fail to prosecute offending bankers, particularly when the bank guaranty law is sponsored by the political party in power, which naturally desires to make the law at least apparently successful. The public also becomes less hostile to defaulting bankers and accepts more readily the justification of such bankers, since the depositing public loses no money under the system. The net result is that the conviction of bank officials under the deposit guaranty system is more difficult. To keep the public interested in the prosecution of offending bankers, it has been proposed to levy general taxes to provide part of the guaranty fund.

Guaranty as Assessment Insurance

Guaranty of deposits is also objected to on the ground that it is a form of assessment insurance, is not actuarial, does not select risks, and suffers from a high concentration of risks. It is true that guaranty of deposits is a sort of assessment insurance, but it is without the defects of such insurance. If it were made compulsory on all banks, the danger of the survivor being burdened and uninsured would not apply; and if, under a voluntary plan, a withdrawing bank should be held to pay losses arising

for, say, six months afterwards, and if the amount of the assessments were strictly limited, the above danger would be minimized. Besides, the risk, instead of increasing with the age of the insured bank, would normally decrease as the bank matures, becomes conservative, and accumulates a surplus. Bank failures do tend to concentrate in periods of depression and in industrial areas; there is not, and cannot be, the dispersion of risks among many banks of different types, particularly if the guaranty system applies to banks of a single state, nor can there be a classification and selection of risks and an adjustment of premium according to risks, when the system applies to all banks. The necessity of a strict supervision to reduce the banks to uniformity of risk is therefore evident, as is the necessity of a strict examination of the candidate bank before admitting it to the system.

CHAPTER IX

RESERVES FOR PROTECTION OF BANK CREDIT

Considerations Governing Size of Cash Reserve

In Chapter VI it was stated that one of the three essential objectives in protecting bank notes is to provide for their instant convertibility upon demand by the holder and thus maintain their parity. The same applies to demand deposits, if checks and sight drafts are to be kept at par.

The problem is to keep on hand or within reach sufficient cash to meet not only ordinary but extraordinary demands. The sum kept for meeting the ordinary demand is spoken of as "till money," or "cash," and that for meeting the extraordinary is called "reserve money." "Reserve" is sometimes used to cover both sums. The till money may be in any form; the reserve should consist only of legal tender or standard money. The amounts that must be kept for these purposes are determined by experience and the conservatism of the banker. A bank with relatively few depositors, or with a few exceptionally large depositors, must be cautious and maintain larger reserves than banks with a large body of relatively equal depositors. A bank with a large body of foreign-born or ignorant and excitable depositors must fortify itself against precipitate, unreasoned runs; a bank in a large city needs higher reserves than banks in smaller centers or rural districts. A banker who is conservative, preferring safety to great earnings, and who feels a high sense of responsibility to the community, will keep higher reserves than one not so scrupulous. A bank which has good business relations with a large central bank, or which stands well with the other banks of the city, and which can, therefore, in emergency borrow or rediscount, may safely carry lower reserves. The reserves against demand

liabilities need to be higher than against time liabilities, since advance notice may be required in the case of time liabilities, and the maturities being known, provision against their liquidation can be made. Finally a bank with a good secondary reserve which can be liquidated in emergency need carry only small reserves.

The proper reserve has to be determined, therefore, by each bank for itself in the light of these and other controlling conditions. The penalty of expansion on too slender reserves is to incur adverse clearing house balances; the percentage of reserve, as among the banks of a system, cannot vary to a great extent with impunity. The state may determine upon some proportional reserve which, in the light of average experience to date, seems to provide a normal degree of safety, and prescribe this as a minimum, and close or penalize banks which continually trespass on this minimum. This has been the practice in the United States with respect to both notes and deposits. The banks are expected to keep—and usually do keep—larger reserves than this minimum.

Desirability of Minimum Reserve

It is very questionable whether it is desirable to establish a minimum reserve by law, though it does exert a restraining influence on a few reckless bankers who might otherwise injure the whole financial fabric. On the other hand, the reservation of a minimum amount renders the reserves impotent at the very time they should, and otherwise would, perform the service for which they are kept, namely, that of providing for convertibility in emergencies. Such a minimum gives the banker a weapon of self-defense, but ties his hands. The psychological effect of the known large reserve is undoubtedly good, allaying the depositor's fears as to the bank's ability to pay on demand; but if the depositor also realized that this reserve could not be actually used when required, his faith would be less strong. A further disadvantage

of the fixed minimum reserve is that it undoubtedly tends to become the maximum kept by the banks.

The banker steers his course between two opposing tendencies. A cash reserve which bears a high ratio to the demand liabilities promotes safety and high confidence in the bank; but the bank makes its profits on extensions of credit by way of notes, deposits, and so forth, and the lower the ratio of reserve to these liabilities the greater the earnings of the bank. The bank is a corporation whose *raison d'ètre* is profits to its stockholders. The officers of the bank are, therefore, moved to build on the cash holdings of the bank as large a superstructure of credit as safety warrants; reckless extensions of loans bring dividends but invite disaster. In these respects a bank differs in no essential from any business institution; a working balance of cash is necessary to each; the important difference is one of degree. Demand liabilities, in contradistinction to time liabilities, constitute practically the whole credit of a bank, whereas they constitute only a small proportion of the credit of other businesses. Consequently the greater importance of bank reserves is manifest.

Methods of Increasing Reserves

The cash reserve of a bank fluctuates in size according to the business transacted, varying with the hour, day, season, year, and cycle of years. It is desirable that it should fluctuate, for rigidity would indicate that the bank was not accommodating its customers. This fluctuation is both absolute and proportional. Payments to the bank or deposits of actual cash by customers increase the reserves proportionally to the liabilities, whereas payments of cash by the bank have an inverse effect. Unless there are special state regulations which apply to notes or deposits, it is a matter of little moment to the bank whether it extends credit by notes or by deposits, as demand liabilities of similar nature are created in either case. The bank, however, dislikes to pay out lawful money which will reduce its reserve, force a reduction of its

loans, and lower its profits. The problem of the banker is to keep his reserve in proportion to his liabilities and he has many devices for increasing it in case of necessity.

One device is for a bank to borrow from other banks, in its own or a central city, on its note, secured or unsecured. Hence it is important for it to establish dependable relations with other banks. The relation may be founded upon voluntary association or upon a centralized banking system, or the local clearing house association may function as creditor to needy banks, or the reserve city correspondent may so serve. In a centralized system the central bank gives this succor as a matter of duty.

A second device for increasing a bank's reserve is to liquidate some of its assets. The assets of a business are classified as "slow" and "quick." Quick assets are those which can be converted into cash quickly and easily in emergencies, and consist of high-quality securities and self-liquidating, short-term, commercial paper, and the like. Marketability in emergency implies a well-organized market for the particular asset, such as the stock exchange market for the sale of stocks and bonds. The American practice has been for banks to carry in their portfolios quantities of high-class securities which perform the double function of secondary reserve and earning assets. European banks favor commercial paper for their secondary reserve, since their discount market is well organized; in fact their practice is to keep their spare funds continuously invested in this paper and rediscount freely with any shift in the market. This practice, though at present less possible in the United States, where the discount market is in its infancy, gives promise of rapid extension. The dependence of our banking system upon the securities markets has too closely interrelated the commercial and financial capital of the country and has tended to lay the basis for panics.

A third device is contraction of loans. This may be accomplished through positive methods; that is, the bank may

call for payment of demand loans. If they are paid in cash, the reserve will be built up absolutely. If they are paid with credits on other banks, these may be collected directly or through the clearing house. If they are paid in the bank's own notes, one of two things will result—if the incoming notes are retired and canceled the liabilities will be reduced and the proportional reserve will be restored; if the notes are kept alive in the cash of the bank (as is the case with national banks in the United States), the liabilities will remain as they were and the till money will be increased.

Or the contraction may be accomplished through negative methods; that is, the banker may refuse to issue new loans or to renew old ones when they fall due. As demand liabilities, therefore, do not increase while loans are maturing and being paid, the reserve in consequence is increased absolutely and relatively. Such negative contraction may be accomplished without an actual refusal to loan, merely by raising the rate for bills offered for discount to discourage discounting. High discount rates indicate low reserves and difficulties in getting loans—the condition in which the market is described as "tight." Low rates indicate high reserves, ease in getting loans, and an "easy" money market. In refusing new loans or renewals and in asking higher discount rates the bank exercises discretion—desirable customers are favored, particularly those who have large accounts, carry good steady balances, and have wide business influence.

A further method of protecting reserves is the synchronizing of receipts and loans. By the careful selection of commercial paper with respect to maturities a steady inflow of funds can be realized, or if business is seasonal, large inflow can be had at the times when the demand for loans is exceptionally large. Rather than keep funds idle to provide against a time when it is known that the demand for loans will be great, the banker buys from note-brokers commercial paper which will mature at such time.

Importance of Regulating Cash Reserve

So long as a bank's officers realize their responsibility for meeting liabilities upon demand, and so long as the government authorities enforce the law and regulations to this end, probably the most important duty of the officers is to regulate the cash reserve so as to be able to meet the demands upon the bank. The situation becomes dangerous and critical when the banks suspend specie payments and the government acquiesces in such suspension. In times of threatened panic the banks are wont to appeal to their creditors to refrain from withdrawing funds, the argument being that with a little indulgence in this matter the bank will be in a safe position and not be forced to liquidate. The government may also refrain from prosecuting banks which have suspended specie payments under such conditions. Banks thus operating under suspension of specie payments, being freed from the necessity of maintaining cash reserves, can expand their liabilities without limitation. The requirement of a cash reserve sets a physical limit to the maximum quantity of bank notes and deposits issuable by a bank, such quantity being only the legal multiple of the reserve. Under suspension the deposits and bank notes arising from discounts "may be as infinite as the range of speculation and adventure in a great commercial country."

Essentials of Secondary Reserve

The banker likes to have all his assets earning profits. Loans and Discounts earn interest and discount; the Securities Owned yield interest or dividends and may increase in value with changes in the market or with the approach of their maturity dates; portions of the bank building may be leased to outsiders for good rentals; the Due from Banks may be earning 2 or more per cent on its average amount; Clearing House Items and Transits are not earning assets, and are therefore cleared or collected as fast as possible and the receipts put into earning forms; but the Cash on Hand appears to the banker an idle asset. Though the mainte-

nance of such idle funds is a necessity for the bank's very existence, it is a necessary evil which he would minimize.

Since the liabilities of a commercial bank are characteristically demand liabilities, the immediate convertibility of the earning assets is their prime essential. The creditors demand cash and are not satisfied with the delivery of securities, however excellent. To offer anything but cash is a confession of failure. Therefore it is the practice, even in the final liquidation of an insolvent bank, to convert the securities at market prices and pay cash to claimants rather than to offer the securities direct. The same holds true of discount paper. Securities or purchased paper, however excellent, are no substitute for cash reserve, though the bank's reserve position may be greatly fortified by their judicious selection. Such readily convertible assets constitute the bank's secondary reserve.

Ready convertibility depends upon:

1. The organization of the market for the respective assets.
2. Their usance.
3. Their self-liquidating quality.

Convertible Forms of Earning Assets

Though the market for stocks and bonds is the highly organized stock exchange, the term of such securities is usually very long and they do not rest upon commercial transactions which liquidate them. Call loans with stock exchange collateral have been regarded by American banks as particularly liquid assets.[1] From the point of view of an individual bank, call loans in ordinary times answer well the requirements of a secondary reserve. Failure of the borrower to heed the call subjects the collateral to immediate sale. Collateral time loans are less liquid. The dis-

[1] "A Banker whose institution has loaned in the aggregate several billion dollars on Stock Exchange collateral during his incumbency says that he has never had occasion to question the liquidity of the 'secondary reserve.' The bank has taken but one loss on a call loan, for $5,000, and that resulted from reluctance to sell the collateral while the brokers were hopeful of being able to ride the storm in which they had become involved." (Annalist, March 4, 1918.)

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advantages of both call and time loans are: first, that the fear of alienating a customer often deters the call of the loan, or the refusal to renew the loan and sell the collateral; and, second, that in times of crisis the market for securities contracts severely and the collateral has to be sacrificed at such prices as promote the violence of panic. European banks rely less upon securities and more upon commercial paper for secondary reserve.

The market for commercial paper is the discount market, including the central bank, and such paper has short usance and is self-liquidating. The paper may be additionally liquid if there is no expressed or implied agreement to renew the loan at maturity, and if the borrower, in order to maintain the good-will of his name, stands ready to borrow elsewhere and take up his paper—even in advance of its maturity, if the holder so desires. This holds true only of commercial paper bought in the open market. Commercial loans to customers are much less contractile, for such customers may expect a continuance of their loans and even special accommodation in times of crisis. Therefore, assuming that the discount market is as broad and convenient as the securities market, and that the rate of interest (discount) is as high, it appears that commercial paper answers the requirements of a secondary reserve better than do stocks and bonds or loans based upon them.

Liquidity for Banking System as a Whole

While in ordinary times an individual bank may find commercial paper, call and time loans, and stocks and bonds readily convertible forms of earning assets, it is usually true that this seeming liquidity is rather the effect of their movement among banks than of an actual reduction of the earning assets of the bank system as a whole. If bank A converts securities by selling them to bank B, there is an interchange of cash assets for securities assets; if they are sold to an individual X, who borrows funds from bank B to make the purchase, there is then a secured promis-

sory note in B's assets instead of cash, and cash in A's assets instead of securities. Only to the degree (and it is usually small) that the cash is derived from other than banks, is there any genuine liquidity for the banking system as a whole. In proportion as all banks rely upon one form of secondary reserve, whether securities or call loans or purchased paper, it becomes increasingly difficult for them to procure cash funds by selling assets.

It appears, therefore, that the ability of the banks of the entire system to pass through a panic without suspension of specie payments cannot be attained by the possession of securities, purchased paper, or other earning assets which may in theory but cannot in fact be sold to other institutions, nor by the contraction of loans, whether call or time loans, secured or unsecured. When a violent panic breaks, every banking system, particularly the decentralized, has experienced the utter impossibility of defense against suspension by such means of liquidation, though local or moderate panics may be averted or assuaged.

In the time of boom immediately preceding a panic the business world resists any extensive contraction of loans. Even bankers, moved by the desire for profits as well as the desire to promote the business enterprises in which their customers are interested, are often blind to the impending crisis or fearful lest a contraction might itself precipitate a panic. For these reasons they are hesitant and reluctant to call or refuse loans. Therefore the "expansion generally proceeds in the absence of fortuitous events to the acute stage, when financial disruption may be avoided only by a rapid expansion of accommodations, leaving the liquidation to be automatically achieved in the period of depression which follows."[2] In other words, contraction usually follows rather than precedes a panic, and the process after the panic is to liquidate first the financial (speculative) loans and then the commercial loans. The increased discount rate discourages all but necessitous borrowers and attracts hoarded or

[2] *Journal of Political Economy*, Vol. 26, p. 727.

foreign funds and may alleviate the situation, but too often such relief does not come until after the panic has broken.

A central bank, moved by its sense of public responsibility rather than by a desire for profits, and clothed with a legal or generally acknowledged control over loans and discount rates, may stifle undue expansion at its inception by raising the discount rate or otherwise discouraging loans; when the panic stage is reached, the central bank can succor solvent needy banks with accommodation based upon its unused reserves and stop the panic, not by a sudden contraction or liquidation but by an expansion of loans to be slowly contracted after the panic stage is passed.

Effect of War on Liquidity of Assets

The recent war has had the effect of reducing the liquidity of bank assets the world over. Forced by the government or by popular pressure to facilitate the financing of the war, the banks bought large quantities of government securities, they loaned heavily on pledges of government securities, and in certain countries they bought stocks in different enterprises. The result today is that their earning assets consist unduly of long-term forms of paper and of short-term paper secured by long-term bonds.

Commercial banking capital has been diverted to financial operations to an undesirable degree. As the situation when the central banks are laden with non-liquid assets is particularly undesirable, the recovery of their former liquidity will be one of the major aims of commercial banks during the coming decade.

Protection of Acceptances and Letters of Credit

The methods of protecting bank notes and deposits have been treated at length in preceding chapters. Bank acceptances are a third form of bank credit requiring protection. This form of liability is incurred when a time bill is presented and accepted by the drawee bank, that is, the bank agrees to pay the bill according

to its tenor. The bill is then known as an "acceptance" and is practically a promissory note of the bank.

If a bank owes some person, say, Henry, money, or has agreed for a commission to honor time drafts drawn by Henry, Henry may draw a bill on the bank ordering it to pay to a third party a certain number of days after sight or date, and such a bill may be discounted in the market either before or after acceptance by the drawee bank. The purchaser of the bill may insist that Henry show him a letter from the bank authorizing Henry to draw to a certain amount and under certain conditions; such a letter is called a "letter of credit." To protect himself further the purchaser may require Henry to attach commercial documents or securities as collateral to the bill. Such documents as the bill of lading, warehouse receipt, and the like, constitute the holder the virtual owner of the goods represented. If the drawee fails to accept the bill when presented or to pay the acceptance when due, the holder of the bill and documents can recover by liquidating the collateral. A bill with documents attached is known as a "documentary" bill, and one without documents as a "clean" bill.

The bank incurs successively two liabilities in the above transactions. In the first place it issues to Henry a letter of credit agreeing to accept certain bills to a certain amount when properly drawn. To protect itself against this liability it may require Henry to pledge collateral security, or to pay or deposit cash to the full amount, or to secure the guaranty of some bank or financial institution that he will pay to the bank the amount of the bills drawn under the letter of credit before they mature. The transaction is reflected in the balance sheet by an increase in the liability, Letters of Credit, and an increase in the asset, Customers' Liability under Letters of Credit. The second liability is an absolute liability incurred when the bank accepts bills drawn under the credit. On the liability side the item, Letters of Credit, is decreased and the item, Acceptances, increased, while on the

asset side Customers' Liability under Letters of Credit is decreased and Customers' Liability for Acceptances Executed increased. If the bill is documentary, in order to protect itself, the drawee bank may at the time of acceptance remove and keep the documents and, if Henry does not cover the bills drawn according to the terms of the letter of credit, may take possession of the goods and convert them into cash; but if the documents are delivered to the person in behalf of whom the bill was accepted, the bank takes special precautions at the time of acceptance to guard well its interests. The safest way is to deliver documents only against payment, but commerce would be unnecessarily restrained by a rigid adherence to this plan. If the bill is clean rather than documentary it becomes upon acceptance practically an unsecured promissory note and is not necessarily based on a commercial transaction.

Limitation of Acceptance Credit

In addition to the interests of the drawer, drawee, acceptor, purchaser, and the party to whom the letter of credit is issued and his guarantor, the general public has an interest in the actual and contingent liabilities undertaken by the banks. These obligations, if recklessly assumed, may seriously affect the banking situation. In old banks experienced in the acceptance business, and in banking communities which exercise a mutual guardianship and restrain excessive accepting by any bank, the danger is small; but when experience in this field of banking is lacking and where banking policy is conservative and sound in other respects primarily because of a severe system of bank supervision, the state may find it necessary to put restraints on the free exercise of the acceptance power. By limiting a bank's power to accept only such bills as arise out of the importation and exportation of merchandise or other such commercial transactions, a very definite limit is put to the extension of this sort of credit. Also if the total amount of acceptances outstanding at any one

time is limited to some percentage of the capital and surplus of the bank, the liability can be kept within safe bounds. A third method is to limit the aggregate amount of acceptances bearing one drawer's name, thus distributing the risk. The United States government restricts the acceptance powers of national banks in these ways.

Difference Between Accepting and Lending

A common misconception exists as to the difference between the processes of accepting and lending. The misconception, as commonly stated, is that in accepting, the bank does not part with money as it does in lending. In preceding chapters an effort has been made to show that when a bank lends it hardly ever does more than extend its demand liabilities in the form of bank notes and deposits. If it lends bank notes, it lends *money;* but the proportion of bank notes to deposits is small and the number of banks that issue notes is also small. To say that a bank lends money when it extends deposits is not exactly true; what is done is to extend its credit in the form of rights to draw money; to only a small degree, however, is money actually withdrawn, for in the first place many checks on the bank are redeposited with it, and in the second place the balancing of checks at the clearing house leaves only small settlements to be made and even these are not usually made in money.

Now when a bank accepts a time draft or bill of exchange it lends its credit to the drawer. Instead of the drawer exchanging his 60-day promissory note for the bank's demand deposit credit, which will more readily circulate in the community, he draws a 60-day bill on the bank, which by accepting the instrument extends to the drawer the use of its time credit for 60 days. The drawer then converts this time credit into demand credit by selling the bill in the discount market for bank notes or a check or for cash which he immediately deposits in his bank.

In the foregoing explanation the important point to grasp

is that the difference between accepting and lending is not the paying as against the non-paying of money, but is the extension of time credit as against demand credit. In either case the bank incurs a direct liability, against payment of which provision must be made. The two facts: first, that it is a time liability, and second, that the drawer has contracted to put the bank with funds before the maturity of acceptance, relieve the bank from anxiety about meeting the acceptance. The bank does not expect to be obliged to pay from its own funds; it regards the liability rather as a contingent one and therefore does not concern itself so much about its reserve. In this there lurks a positive danger. If due caution is taken in selecting drawers, in protecting the issue of letters of credit, and in watching the documentary securities, the need of a reserve is small. No banker, however, can trust in the naive idea that, since accepting does not require the immediate payment of money, he may extend his acceptance business to any amount and keep no reserve as a protection thereto. A reserve should be kept, but it may be much smaller than against bank notes and deposits.

Protection of Bills Payable

A fourth form of bank credit liability that requires protection is Bills Payable. When a bank needs funds and does not find it expedient or possible to discount paper in its portfolio, it may borrow from other banks or financial institutions on its promissory note. Where the practice of rediscounting, either with the central bank or on the open market, is the prevailing banking practice, borrowing by a bank on its note is unusual. In contrast with European practice, where a broad discount market has been developed, the practice of the American banking system has been quite provincial. The common method in the United States has been for a bank to borrow either on its own unsecured note or its note secured by pledge of commercial paper or—sometimes—securities. By this method the paper need not be indorsed, and

the creditor protects himself by insisting upon a liberal margin of safety. Loans of this kind are usually seasonal or arise in tight money periods. A bank which borrows in this way generally carries a good balance with the creditor bank during the rest of the year, and thus establishes friendly relations and a potential "line of accommodation." Interbank borrowings of this sort tend to the maximum utilization of the country's funds and the equalization of money rates both in place and time. The loans are more often time loans than call loans.

During the war the sudden demands upon the banks occasioned by large payments of taxes or subscriptions to loans made it necessary to provide an easy method of negotiating interbank loans. The federal reserve banks were authorized to loan to member banks on their bills payable secured by government securities. This practice became very common and quite largely supplanted the rediscount method.

The state has less occasion to supervise and regulate operations in bills payable than in any other form of bank credit, the reasons being that such bills are relatively small, are occasional, and are between banking institutions, which may be presumed to guard themselves well. By indirection such borrowing may be curtailed, for, as in the case of other loans, the state may limit the liability to any one creditor bank to a percentage of the total assets of that bank. A particular instance where regulation is necessary to prevent the pyramiding of fictitious credits arises when a bank borrows from subsidiaries or branches, or vice versa.

There are at least three variations of this method of incurring liabilities on the bank's promissory note, which are as follows:

1. The borrowing bank may issue to the creditor bank a demand or time certificate of deposit, in which case the Deposits liability is increased rather than the Bills Payable, although the difference between the two is then nominal.

2. The borrowing bank may overdraw its account with its correspondent, which, if it honors the draft, becomes a creditor

by the amount of the overdrawal; the overdraft may be secured by pledged collateral or may be unsecured, and is primarily a loan.

3. The borrowing bank may get its check certified for an amount in excess of its balance; while the overcertified check is in circulation the certifying bank is a creditor of the borrowing bank.

The state usually regards these three forms of borrowing in the light of loans and so classifies them. Overdrawing, and particularly overcertifying, are practices that are often prohibited because they represent loose business methods with their attendant danger.

CHAPTER X

RELATION OF BANK CREDIT TO PRICES

Marginal Utility and Price

Trade is fundamentally barter; the money economy and the credit economy sprang from the barter economy. Under the money economy one commodity possessing the quality of general acceptability was exchanged for any other commodity. The barter nature of such transactions is obvious. Credit simply introduced the idea of exchanging present commodities against future commodities; if credits are offset by credits, the ultimate payment of balances is in kind or money. The person who sells shoes for money or credit gets, in real fact, commodities which the money or credit commands. Exchanges are, then, goods for goods; and the amount of one kind of goods given for a unit of another is the price of the latter. Since goods are generally exchanged for gold or representatives of gold, prices are usually stated in terms of gold, and price becomes the quantity of gold for which a unit of an article will exchange.

Commodities serve in different degrees the wants of man. The capacity to satisfy a want is known in political economy as "utility." The utility of any unit of a commodity decreases as the number of units of that commodity increases. The utility of a unit more or less than any given group is spoken of as "marginal" utility. The asking price of any commodity will depend upon the ratio of the marginal utility of the commodity and the marginal utility of gold, that is, money, to the seller; the bidding price is likewise the ratio of these utilities to the buyer. When a sale or purchase takes place there is an equalization of these ratios of utilities, at a "price." In any market where buyers and sellers compete freely there can be but

one price for a commodity at any time; this resultant price is the "market price."

Basis of Price Level

It is apparent that the market price of any commodity will be high if that commodity has high utility or if the commodity is relatively scarce, or, on the other hand, if money is plentiful and therefore has low marginal utility. The price of any commodity depends, therefore, upon its relative utility as compared with other commodities and upon the price of other commodities in general, that is, the price level; but the price level is an average ratio between the quantities of goods exchanged and the quantity of money against which they are exchanged. The quantity of money has two elements: the number of units of money, and the number of times that these units are exchanged against goods within a period. Ignoring for the time being the influence of deposit currency, the price level depends upon three factors: (1) the quantity or number of money units in circulation, (2) their velocity of circulation, and (3) the quantity of goods against which they are exchanged. The price level varies directly as the quantity of money and the velocity of circulation and inversely as the volume of goods traded. This is the quantity theory of money. The price level varies with the total purchasing power of the community, and this purchasing power is the product obtained by multiplying the number of dollars in circulation by the number of times the dollars circulate within a period. Or stated inversely, the value of a dollar (its power to command articles in exchange) decreases as the number of dollars or their rate of circulation increases.

Effect of Money and Deposits on Price Level

The purchasing capacity of an individual at any time (his power to command goods in the market) is increased by his bank deposits subject to transfer by check—instead of paying by

money he pays by check. The statement of the quantity theory must, therefore, include the volume of bank deposits and the rate at which they circulate. The best statement of the theory is probably contained in Professor Irving Fisher's formula, MV plus $M'V' = P\,T$, in which M is the quantity of money in circulation, V the rate of turnover of money, M' the quantity of deposits subject to check, V' the rate of turnover of deposits, P the price level, and T the volume of trade.

But M and M' are not independent factors; they bear a more or less constant ratio to each other, because of two facts: (1) that bank reserves are kept in a more or less definite ratio to bank deposits, out of the requirements of law or business expediency; (2) that individuals, firms, and corporations preserve more or less definite ratios between their cash transactions and their check transactions, and also between their money on hand and deposit balances. In a given community the quantitative relation of deposit currency to money in circulation is determined by considerations of convenience; and while the ratio differs greatly for the individual, for the community the average ratio is quite constant and can be approximately determined. If the ratio of bank reserves to M' is 1 : 4, this means that as the quantity of bank reserves increases, M' may expand four times the amount of the reserve increase. For instance, if the quantity of money in bank reserves were $1,000,000 and the superposed M', $4,000,000, an increase of the reserves to $2,000,000 would bring M' to $8,000,000. The price level P will vary with the combined amounts of M and M'. A lowering of reserve requirements is, therefore, likely to bring a higher price level through the inflation of deposits.

Remoter Influences on Prices

The five factors, M, M', V, V', and T, are the only factors that can affect P directly. Any other influences on prices must act through one or more of these five factors and there are hundreds of such influences. M is affected by such factors as the

production of gold and other metals, their consumption in the arts, the habit of hoarding, the international shipment of specie, and so forth. V and V' depend upon the methods of making payment—how frequent, how regular, how synchronized with receipts—the habit of hoarding, the facilities of communication, the development of banking, and the like. M' varies with the banking system, with the extent of the use of deposit currency and with industrial conditions. T is affected by geographical differences in natural resources, the division of labor, the knowledge of the technique of production, the accumulation of capital, the extent and variety of human wants, facilities of transportation, freedom of trade, the character of the monetary and banking systems.

To illustrate: Consider the effect of the introduction and development of the telegraph on the price level. This means of communication has increased the velocity of the circulation of money (V) and of deposits (V') and therefore has tended to increase prices (P); it has also facilitated production and increased the volume of trade (T), and therefore has tended to lower prices. The net resultant of these two opposing forces is difficult to determine, but it was probably upward. Or consider the effect of the immigration of foreign workmen to our country. It has increased the total production and trade (T), and therefore tended to lower prices (P); it has also occasioned a continuous outgo of funds from our country to friends in the emigrant country, reducing M and M', and therefore P. The immigrants have tended largely to live in cities and other densely populated areas, and thus to accelerate the velocity of money (V) and of deposits (V') and to foster banking accounts (M'), and therefore to increase prices (P). In this instance also the net effect of these influences on the various factors is difficult to determine. These illustrations are sufficient to suggest to the reader that too categorical statements as to the effect of some factor on the price level are dangerous unless careful consideration is given to the various and often con-

flicting ways in which a particular factor may possibly affect the price level.

Index Numbers

The price level is calculated and estimated in terms of an index number, which is some form of average of prices of representative commodities. When the price level rises or falls the prices of all commodities do not rise or fall together or in the same degree or direction. The index number is simply an average of prices, or of the percentages of increase or decrease of prices, of a selected list of commodities.

In the preparation of index numbers there are many considerations which vitally affect their usefulness, among which are the following:

1. *The Prices Used.* What prices should be used is governed by the purposes to which the index number is devoted. If the index is to be used over a broad area, the prices should be those prevailing in a central, organized, competitive market. If the price movement in a limited locality is to be studied only prices obtaining in that locality should be used.

Wholesale prices fluctuate more widely and are more quickly responsive to changes in supply and demand than retail prices. An index number based upon wholesale prices is therefore a better barometer of business conditions for manufacturers, jobbers, large credit-grantors, and the like, but an index number based upon retail prices measures better the changes in the cost of living and the proper adjustment of wages thereto. In any case, the average price for the day, week, or month is better for purposes of comparison than the prices on the market at a certain instant.

2. *The Commodities Used.* As it is impossible to include all commodities in the preparation of an index number, only the principal ones are used; but the more the better, for the index is then the more representative. If, for example, the index is to be used to determine the variations in the cost of living for a particu-

lar class of workmen, the commodities used should be those that compose his budget. A wider use requires a larger and more general list of goods.

3. *The Base Prices Used.* Care is necessary lest the base year be a year of exceptionally high or low prices, and the percentage of increase or decrease be thereby vitiated. To overcome this danger, it is best to use as the base the average prices for a decade; the Sauerbeck index number, for instance, uses the average prices for the decade 1858–1867.

4. *The Kind of Average Used.* Of the common methods of averaging a series of numbers the following four may be noted:

(a) One method is to arrange the numbers in a series according to their magnitude and choose the middle figure, which is called the "median." It is the easiest of all methods to calculate and does not attach undue importance to very high and very low numbers; on the other hand, it pairs numbers regardless of the relative quantities sold at the respective prices.

(b) A second method, the "geometrical" average, is to take the nth root of the product of the n prices or of the prices of n commodities, n signifying any given number. The chief criticism of this is the difficulty of its calculation, as it requires the use of logarithms.

(c) A still more awkward average to calculate is the "simple harmonical" average, which is the reciprocal of the sum of the reciprocals of the prices.

(d) By far the most common average is the "simple arithmetical" average which is the quotient of the sum of n prices divided by n. To make the average more exact the prices are "weighted" by using as the multiplier numbers which indicate the relative quantities of the commodities sold at the respective prices, and the sum of these products is then divided by the sum of the weights. This "weighted arithmetical average" is quite generally used and it has the advantage of being fairly easy to calculate.

Another common form of index number is to state the sum of values of the same quantities of goods at their respective prices prevailing at different dates.

Whatever form of average is used, the results are approximately the same; exactitude is not expected, for the numbers are but *indexes* of price changes.

Useful index numbers are those of the *London Economist*, Sauerbeck, Dun, Bradstreet, Gibson, the United States Bureau of Labor Statistics, the Canadian Department of Labor, and the *Annalist*. The following table gives some of these numbers for recent years:

INDEX NUMBERS

DATE	ENGLISH			AMERICAN			
	London Economist	Sauerbeck Statist	Board of Trade	Canadian Department of Labor	U. S. Bureau of Labor Statistics	Gibson	Bradstreet
1896	1950	61	.....	92.5	90.4	34.0	5.9124
1897	1890	62	.....	92.2	89.7	34.7	6.1159
1898	1918	64	.....	96.1	93.4	38 7	6.5713
1899	2145	68	.....	100.1	101 7	41.6	7.2100
1900	2126	75	100.0	108.2	111.5	44.2	7.8839
1901	1948	70	96.7	107.0	108.5	44.5	7.5746
1902	2003	69	96.4	109.0	112.9	53.5	7.8759
1903	2197	69	96.9	110.5	113.6	49.0	7.9364
1904	2136	70	98.2	111.4	113.0	48.3	7.9187
1905	2342	72	97.6	113.8	115.9	47.2	8.0987
1906	2499	77	100.8	120.0	122.5	49.8	8.4176
1907	2310	80	106.0	126.2	129.5	50.9	8.9045
1908	2197	73	103.0	120.8	122.8	54.2	8.0094
1909	2373	74	104.1	121.2	126.5	59.2	8.5153
1910	2513	70	108.8	124.2	131.6	59.3	8.9881
1911	2586	80	109.4	127.4	129.2	56.0	8.7129
1912	2580	85	114.9	134.4	133.6	62.6	9.1867
1913	2692	85	116.5	135.5	135.2	58.1	9.2115
1914	2658	85	117.2	136.1	133.8	60.8	8.9985
1915	3329	108	143.9	148.0	135.2	64.0	9.8531
1916	4216	136	186.5	182.0	166.3	74.9	11.8236
1917	5418	175	243.0	237.0	236.6	110.8	15.6385
1918	6036	198	267.4	279.7	266.3	122.8	18.7117
1919	6226	206	296.3	293.9	286.6	121.4	18.6642

Inflation and Its Effects

According to the quantity theory of money, most exactly stated in Professor Fisher's "equation of exchange," an increase in money and bank credit beyond the needs of trade at a given price level tends to raise that price level. Such is the common conception of inflation. The equal and simultaneous movements of total purchasing power and trade would result in a stable price level. Total purchasing power has been shown to be the sum of two products, namely, the quantity of money in circulation multiplied by its efficiency (or velocity of circulation) and the quantity of bank deposits multiplied by their efficiency. If this total purchasing power remains the same but the quantity of trade declines, there will be inflation. If the quantity of trade remains the same, then inflation may be caused by increases in the quantity of money or of bank credit, or in their efficiencies. There can be gold inflation as well as paper money inflation or bank credit inflation.

It is quite impossible to determine the actual volume of goods that enter into trade during a certain period in a complex country like ours. The relative increase or decrease may, however, be approximated from certain indexes. The best barometers of trade, measured in physical units and not in dollars of value, are the production of the basic materials, such as coal, iron, petroleum, copper, silver, the production of agricultural commodities, the tonnage of the railroads, the tonnage of vessels entered and cleared at lake ports and seaports, the number of building permits, and the number of shares traded on the stock exchanges.

The volume of money in circulation and that of bank deposit currency, as well as the velocity of both of these, can be statistically determined with a fair degree of exactne s. Professor Irving Fisher publishes annually the data for his "equation of exchange." Professor Kemmerer recently published[1] the following indexes bearing upon war inflation:

[1] *American Economic Review*, June 1918.

INDEXES BEARING ON WAR INFLATION

Year	Trade	Wholesale Prices	Union Wage Rates	Money in Circulation	Gold & Gold Certificates	Bank Deposits	Total Bank Clearings	Clearings Outside of New York City	Cash Reserve of Banks	Reserve Percentage
1910	93	99	96	95	92	90	100	94	93	12.5
1911	95	97	98	98	98	94	97	96	98	12.6
1912	102	101	100	100	101	102	106	103	101	12.0
1913	105	102	102	102	105	104	103	106	101	11.7
1914	104	101	105	106	105	110	94	102	106	11.7
1915	108	102	106	111	119	118	114	109	116	11.9
1916	113	125	109	125	150	147	159	144	130	10.7
1917	127	178	117	148	185	174	186	182	153	10.6

Undoubtedly the velocity of the circulation of money and that of deposits also increased during this period. Combining the factors of purchasing power, it is very evident that they increased faster than trade and explain the decided inflation of prices.

Inequalities of Inflation

Increases of money and bank credit, if used, tend to price inflation, but they do not inflate all prices equally because there is not an equal demand for all kinds of things or services. The inflation comes not simply from an increase in the quantity of purchasing power, but from the increasing competitive efforts to exchange the money or credit for things and services; if no attempt were made to use the enlarged purchasing facilities there would be no effect upon prices.

An abnormal demand for munitions, for instance, and the use of almost unlimited supplies of money and credit in competitive bidding during the years 1914–1919, caused a great increase in their price. But the price of real estate did not rise because little, if any, of the new credit was used for purchasing real estate. The high profit in the manufacture of munitions tended to cause the transfer of capital from the development of real estate to the

manufacture of munitions. This drift of capital was accompanied by a drift of laborers eager to earn the higher wages paid in munition factories. Employers in other lines of business then found that they had to give their employees higher wages to hold them; they had to bid for capital in like manner. The demand for many products was increased by the higher purchasing power of the munition workers and manufacturers. In consequence there followed an equalization of wages and prices in the various lines; that is, the inflation became quite general.

It has been previously stated that in 1914–1918 real estate prices did not rise with the inflation because capital funds were devoted largely to other uses. Nor did wages and salaries respond with such uniform rapidity as the price level of goods. This unresponsiveness was due to the same fact, viz., that, relatively speaking, less was spent upon these items than upon goods. The wage-earner lacks the ability to foresee the depreciation in the purchasing power of his earnings as the prices of his budget rise; and even when he does foresee it, his timidity often prevents him from wresting a just advance from his employer. The simultaneous advances of wages and prices is prevented by lack of foresight, or by custom, or contract, or union wage bargain. Salaries respond still more slowly. In times of rising prices the employer of labor is therefore at an advantage and the employee finds his real earning power declining *pari passu* with the rise.

Interest Rate and Inflation

Nor does the interest rate rise in proportion to the inflation. The loaning class is less shrewd and apt in sensing conditions and is usually content for a time to loan at, say, 3 per cent to borrowers who would be willing, if necessary, to pay 5 per cent. The enterprisers enjoy, therefore, the further advantage of borrowing money at the former low rates. This encourages borrowing, and thereby the creation of more deposits; and these in turn swell prices still higher and make borrowing still more advantageous.

Periods of rising prices are therefore boom times for the manufacturer; he buys material at today's prices, and by the time they are manufactured he finds their prices have risen with the general price level. He hires labor at former or slightly advanced rates and he borrows capital at former or lethargically rising rates. The market for his product is steady and waiting, at good prices, and profits are high.

Meantime the wage-earner is victimized by a progressive depreciation of his earning power. The salaried man suffers likewise, as does anyone whose money income is a fixed sum. The bondholder, for example, finds that his interest will buy less and less and that the purchasing power of his principal when repaid has decreased. The real value of fixed rentals likewise declines. The thrifty saver finds his life's accumulations shrinking in worth to him. The income from endowments of educational and charitable institutions decrease in purchasing power, making it impossible to continue the former scale of operations. On the other hand, the debtor class are enabled to extricate themselves from debt by the repayment of a sum much less in its purchasing power than the sum borrowed.

Schemes of Price Adjustment

Obviously this system is unjust. It encourages debt and discourages thrift. It burdens the creditor, the wage-earner, and the salaried class. It lets the shrewd enterpriser class batten on the poor, the ignorant, and the thrifty. The remedy for these evils is to stabilize the purchasing power of money. The lender might theoretically compensate himself by demanding additional interest; if, for instance, he is content with 5 per cent interest but prices are rising 3 per cent per year, he should ask 8 per cent interest. Wages and salaries might be adjusted in proportion to the inflation of budgets. Repayments of loans might be on the basis of index numbers; $1,200, for example, should be repaid if prices have arisen 20 per cent during the period of a $1,000 loan. Prom-

issory notes, wage contracts, and bonds, for instance, might be drawn to provide for repayment proportioned to changes in the price level. The use of index numbers for the purpose of making such adjustments is an illustration of "multiple standards," that is, a standard of value based on the mean price of a number of commodities.

The objections to multiple standards are of a threefold nature:

1. "The uncertainty as to the best way of computing index numbers, the varying results reached by different methods of equal validity, the difficulty of recording with certainty the actual changes in prices, the inevitable margin of error."[2]
2. The cessation of certainty and calculability in all credit transactions, thus adding to the speculative risk and element in business.
3. The question whether commodity or labor standards are, after all, really fair bases for computing postponed payments.

Professor Irving Fisher has recently advocated a scheme known as the "compensated dollar" for stabilizing its purchasing power. The plan is to retain our present system of certificates and coins in part, and make them redeemable at the mint for quantities of gold varying with the index number calculated by a government bureau. Adjustments would be made quarterly or monthly in the "bullion dollar," for which the coined dollar (or certificate) would be exchangeable. The pure gold in the coined gold dollar is 23.22 grains; if the price level were to rise 2 per cent during the quarter, the coined dollar (or certificate) might be exchanged at the mint for 102 per cent of 23.22 grains of uncoined gold at the will of the holder; or, vice versa, the holder of 23.6844

[2] Taussig, Principles of Economics, Vol. I., p. 302.

grains of bullion could exchange it at the mint for $1 in coin (or certificate).

The above plan constitutes a system of adjustable seigniorage, the seigniorage increasing or decreasing with the rise or fall of the index number respectively. Or, stated otherwise, the mint price of gold would vary inversely with the price level. Under these conditions the coined dollar would purchase exactly the same amount of commodities, other than gold, the year round. If the price level rose 1 per cent the coined dollar would exchange for 1 per cent more gold, and this would exchange for the former amount of other goods. Instead of the purchasing power of a fixed amount of gold (23.22 grains) varying, the amount of gold would increase or decrease so as to have a fixed purchasing power over other goods. The more frequent the adjustments of the seigniorage the more stable would be the price level. Too frequent melting and minting of coins could be checked by a small brassage charge; and speculation in gold on the market could be defeated by limiting the adjustment made at any one time.

Inflation has certain advantages. It stimulates industry by increasing profits to enterprisers, and this may be desirable in times of emergency. It also tends to force economies in consumption and limits extravagant and luxurious spending. The benefits of inflation, however, are more than counterbalanced by its evils.

Financial Panics and Industrial Crises

Earlier in the chapter it was shown that a period of rising prices is a period of business boom, inasmuch as profits of the enterpriser are then unusually large. Interest on the manufacturer's growing investment and the wages and salaries of his employees are then stationary, whereas the value of his product grows more than normally during the process of production, his materials rising with the general price level, and marketing costs are relatively low, in a sellers' market. The unusual profits induce enterprisers to increase their producing capacity, and they

borrow more heavily to finance their enlarged production and their plant extensions. The increased borrowing brings about the creation of deposit currency which when used tends to raise the price level still higher, causing the borrowing of greater and greater sums. A vicious circle is thus formed.

But these operations obviously cannot go on indefinitely. The cycle is stopped by the rising costs of doing business and the exhaustion of credit. The excess of demand over supply of loans finally forces up the rate of interest; labor, which has become pinched by the high cost of living, finds itself strategically well situated for demanding higher compensation. Meanwhile the extensions of bank credit have reduced the ratio of cash reserve to deposits to the danger point, and bankers are forced to refuse new loans or even to refuse to renew time loans and to call demand loans. This contraction forces a halt in business promotions; projects come to nothing or suspend unfinished. Finance houses suddenly find themselves surfeited with undigested securities. Borrowers have to liquidate securities to raise funds, or lenders have to sacrifice collateral to cover unpaid loans. Interior banks taking fright recall their funds deposited in metropolitan banks, and thus force further liquidation. The result is a financial stress and break—a precipitate crash on the stock market—a panic. Some disturbances of this type stop at this point and are known as "money panics," or "bankers' panics," or "Wall Street panics." The undertone of commerce and production may be strong, and only the surface phenomena—that is, money and finance—need be adjusted. If such be the case, the recovery of normal conditions will be speedy and the losses will have been sustained largely by the financing and speculating group of business men. Such, for instance, were the panics of 1884 and 1903.

Overproduction and Underproduction

But sometimes the commercial and industrial basis is also decidedly unsound. The cycle of prosperity has brought an over-

extension in many lines, and the necessary adjustments must be more fundamental. Probably the most incisive criticism of our capitalistic system is that production is carried on without proper co-ordination of different lines, so that suddenly society finds that too much of its energy has been devoted to the production of certain things and too little to others. Capitalistic production connotes production in advance of need; it requires much time—and the different industries require different lengths of time—for the delivery of products. Capitalistic production is based on specialization, one group producing one thing which it exchanges for the things produced by other groups. The quantity of any one product that can be absorbed by the community is quite definitely related to the quantities of other goods produced for exchange. Unemployment and overproduction are but ill adjustments of this proportion. The exchange ratio (the price) of goods is the index by which the production of this or that commodity is actually controlled. Society under the capitalistic system relies upon her enterprisers to gauge and forecast these prices and to adjust production so as to maintain a relatively steady and proportioned flow of goods. In a single industrial plant the general manager so apportions the labor, materials, and space as to secure harmonious adjustment of the outputs of the various divisions. If in assembling the final product five pinions are required for every axle, the plant is organized to produce them in that proportion. But society lacks such a general organizer and administrator; each producer is free to produce what he will, in what amounts he thinks best. The result is spasmodic overproduction and underproduction in various lines. A sort of anarchy prevails, and production and consumption are in constant flux and readjustment.

This lack of correlation between supply and demand arises, therefore, from various causes: In the first place, production is made in anticipation of demand, and the interim between production and consumption varies with the commodity and is not

always determinable. The demand is also difficult to estimate for it is subject to varying influences and changes often with the caprice of fashion, legislation, politics, and the like. The enterprisers, moreover, are not omniscient. In the second place, even if enterprisers were able to forecast perfectly the demand, they might not be able immediately to readjust their production, for there is a certain immobility in the factors of production; the enterpriser may logically conclude that it is better for him to run at a small loss than to shut down the whole plant; or he may decide to flood the market on purpose to drive his less able competitors to the wall. Finally, one enterpriser has no control over his competitors; he may gauge the demand perfectly, but find when he has his product ready for sale that the market is glutted with competing supplies, whereas in other lines of commodities there is a dearth.

Whatever the causes of periodic or spasmodic overproduction, it is a characteristic phenomenon of the capitalistic system that from time to time certain products can be sold only at a loss. The result is that many commercial and industrial concerns fail and also involve their creditors in ruin.

Effect of Investment on Production

Overproduction in a certain line is often largely explained by overinvestment therein. If a field of investment gives promise of permanent high earnings, capital, and thereby labor, are diverted to it from other industries which suffer in consequence. The capital stocks of the flourishing industries are freely bought, often on credit, and much speculation usually attends the price movements of these shares. If later the expected dividends fail to materialize, the market for the shares also fails and their value falls precipitately. In new countries like the United States, where opportunities seem unlimited and where enterprise has free play, industrial crises are more frequent and severe than in old conservative countries.

Professor T. N. Carver traces this cause of overproduction still further back. He states a general law to the effect that:

> A slight fluctuation in the value of the product tends to produce a violent fluctuation in the value of the establishment producing it. Stated in still more general terms, the value of producers' goods tends to fluctuate more violently than the value of consumers' goods. This law is capable of still further extension when we consider that producers' goods are themselves produced by other productive agents. . . . The law might therefore be extended so as to read, that the farther removed the producers' goods are from the consumable product, and the more remotely their value is derived from that of some consumable product, the more violent the fluctuations in the value tend to be. This would be the tendency until that stage was reached where the producers' agents were no longer especially connected with one particular line of production, and were not therefore affected merely by changes in price of the one kind of consumable product. . . . Not every rise or fall in the value of products is believed to be permanent. But where the high or low price of a product continues for some time, it invariably leads to a belief that it is likely to continue; and this raises or depresses the price of the productive agent out of proportion to the rise or fall in the price of the product. . . . Since their willingness to invest depends, not upon the value of the gross product of the productive agent, but upon the excess of that gross product over and above the cost of using the agent,—which excess . . . . fluctuate[s] more violently than the total value,—the instability of the investors' market is therefore not altogether due to psychological changes on their part, but in large degree to the objective causes which affect the value of the things in which they invest.
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> A slight rise in the price of consumers' goods will so increase the value of the producers' goods which enter into their production as to lead to larger investment in producers' goods. The resulting large market for producers' goods again stimulates the production of such goods and withdraws productive energy from the creation of consumers' goods. This for the time tends to raise the price of consumers' goods still higher, and this again to stimulate further creation of producers' goods. There is no check to this tendency until the new stocks of producers' goods begin to pour upon the

> market an increased flow of consumers' goods. This tends to produce a fall in their value, which in turn produces a still greater fall in the value of producers' goods; and so the process goes. There seems, therefore, to be a fundamental reason for the periodicity of industrial depression, which can only be removed by such complete knowledge and understanding of the situation as would enable the business world to foresee the tendencies and take measures to overcome them.[3]

Psychological Factors

One trade is bound to another by the fact that they are each other's customers. High profits in one line increase the demand for the products of another line, and therefore its prices and wages. In addition to this bond, the lines are bound together by psychological ties. Men on a market act as men do in a crowd; they do not make their estimates independently and scientifically, but are much influenced by the general opinion or the opinion of certain leaders; others are wholly imitative, particularly the amateur speculator. For this reason an event which in theory should affect market values but slightly may actually cause rapid and wide fluctuations. Therefore overproduction in one or two lines, an event that is inevitable under our capitalistic system, followed by declining prices and security values, will occasion a bearish opinion that will infect the whole industry or market. This psychological factor not only broadens the scope and adds to the precipitancy of the panic, but it also accelerates the boom preceding a panic and holds the business world in a state of depression sometimes for an undue period after the panic.

Periodicity of Panics

Business depression is characterized by low production, dull trade, hesitant investment, hoarding, low prices, liquidation, low interest rates, and unemployment. How long the depression lasts depends upon the degree of overproduction; the rejuvenation of

[3] *Quarterly Journal of Economics*, May 1903, p. 497.

business cannot begin until the oversupply is consumed and the necessary readjustments have been made in production. The depression may be broken by some fortuitous event, such as a presidential election, the signing of a treaty, the favorable turn of the balance of trade, and the like. The normal time required for the cycle of boom, panic, depression, and recovery is twenty years, with minor disturbances at the end of the first ten years. A certain periodicity in panics has been frequently pointed out, and such periodicity is exemplified by the American panics of 1819, **1837,** 1847, and **1857;** and of **1873,** 1884, and **1893,** and 1903, the more severe of which occurred in the years in heavy type.

CHAPTER XI

CLASSIFICATION AND FUNCTIONS OF BANKS

Specialization of Bank Functions

Banking institutions are specialized dealers in and guarantors of credits. The evolution of our system of credit has been characterized by the same division of labor which dominates our social and economic structure. Not only have credit institutions separated from the merchant and industrial institutions, but the credit institutions have themselves specialized on the basis of function. This differentiation of functions affords the most useful classification of banks. Banks may be viewed, of course, from an economic or social point of view as well as from that of business. The economist and sociologist consider the services of the bank with reference to the furtherance of human welfare. The banker, however, thinks of his bank as a profit-making institution; he may philosophize on its economic and social influences, but unless moved by a high sense of public duty he is prone to think most of dividends. His customers, moreover, are likely to think of the bank from the purely business point of view—as an institution from which to secure loans, in which to deposit money, and by the aid of which securities may be floated and estates managed.

Classification by Functions

The most common classification of American banks based on bank functions makes three divisions, namely:

1. Commercial banks.
2. Investment institutions, including savings banks and bond houses or investment banks.
3. Trust companies.

But further division on the same basis is possible. The New York

State banking law has special sections for the following classes: state and national (commercial) banks, federal reserve banks, credit unions, foreign banking corporations, investment bankers, investment companies, Land Bank of the State of New York, personal loan brokers, personal loan companies, private bankers, state deposit companies, savings and loan associations, savings banks, trust companies, discount companies, acceptance houses, note-brokers, and others. Indeed the subclasses that are possible are limited in number only by the number of functions and combinations of functions open to such institutions.

Classified as to source of authority to do business, banks are commonly grouped as federal or national, state, private, and foreign. Another classification is into parent or mother bank, branch, agency, and correspondent. Still another is into joint-stock, mutual, private, and individual. And in any system the banks may be specified as central, member, or non-member; as bank of issue or non-issue; as reserve city bank, central reserve city bank, or country bank; as land bank, agricultural bank, mercantile bank, industrial bank, and so forth.

Functions of Commercial Banks

The major functions of commercial banks have been described in Chapter IV as the testing and guaranty of credit, and the extension of credit by means of notes, deposits, and acceptances. Commercial banks extend short-time loans, handle short-time mercantile paper, receive deposits subject to check, issue bank notes, issue letters of credit, and accept bills drawn upon themselves. In carrying on these main activities many incidental services are performed for customers. In a circular published recently a metropolitan bank advertised "forty-three separate service divisions—all working for a single object, namely, to render a powerful and well-balanced banking service." In their competition for business, banks adapt their services to their actual and prospective customers' needs, adding feature after feature.

In this point of service, by the way, there is probably opportunity for both the large and small banks. The smaller banks can render their fewer customers services that are probably more intimate and personal than the great metropolitan banks, whereas the latter can offer facilities more powerful, varied, complete, and expert.

The accessory and minor functions of commercial banks will be discussed in detail in the body of this text. The nature of these functions appears in the statement that from his bank the business man receives the ready accommodation of a loan or the prompt cash conversion of commercial papers; he finds it convenient to keep his money and make his payments at the bank; he is advised in the purchase and sale of securities and their handling; the bank assembles vast credit files which are open to him; his funds are transmitted over distances, his foreign trade is facilitated, his business operations planned and guided for him.

From the point of view of economics, bank credit obviates the use of metallic money and conserves the metals for use in the arts; it facilitates the production, movement, and exchange of goods more effectually even than money does; it stabilizes credit, resting it upon long-established, widely extended, conservatively managed institutions. The banker determines the personnel of the business world, by extending credit to persons of character and capacity and by choosing as debtors those who have either proved abilities or give reasonable promise. Capital is thus diverted into channels and hands where it is most productive and most useful to society. The bank assembles the stray and hoarded funds of the country into its vaults and puts them to productive use. Capital is thereby conserved. The benefits of thrift are taught and the importance and equity of keeping contracts to the letter are brought home to the commercial world.

Specialization of Commercial Banks

Commercial banks specialize in loans, adapting their services to their locality or to a special clientele. Some carry specializa-

tion to such degree as to relinquish many of their banking functions. For instance, to facilitate the production and marketing of cattle, "cattle loan companies" conduct a banking business in the primary livestock markets and production centers. Certain banks in close touch with speculative exchanges cater to brokers and commission men. Others in our great seaports cater to foreign trade and international finance. Devotion to a limited field of operations results in expertness and ability to perform a particular sort of loan or service better and at lower rates than is possible for competitors who are less specialized.

But side by side with this tendency of certain banks to limit themselves to narrower fields, there has been a movement in the opposite direction. Banking institutions find it advisable to be able to perform for their customers all the financial services for which they have need rather than to let them depend in part on outsiders. In view of the expense of organization and overhead which the bank must carry in any event, to undertake these additional services may be economically very desirable. State and national banking laws have hedged the banks with restrictions on their field of operations, but commercial banks are gradually developing such side lines as long-term and agricultural loans, acceptances, trust business, insurance agency, loan brokerage, safe deposit and storage, investment buying and selling, and so forth. The trust companies in the several states are pushing their commercial banking departments, and national banks are being permitted by federal and state law to handle trusts. An identity of function will probably not be developed soon but the evolution is toward a close approximation.

Savings Banks

1. *Mutual or Trustee Savings Banks.* The savings bank started as a mutual savings association and is commonly regarded as a benevolent institution. A mutual savings bank is a financial establishment which receives deposits up to a fixed maximum

PUBLIC LIBRARY
OF THE CITY OF
COLORADO SPRINGS.

amount from individuals, provides safe-keeping for the funds and, having aggregated them, invests them in securities declared by the state legislature legitimate for trust funds; the interest from these investments, after the bank's expenses are deducted, accrues to the depositors in proportion to their deposits. The relation between depositor and bank is one of trust; the funds of the bank are held by its officers as trustees; the assets, profits, and losses are distributed ratably among depositors, and the officers get no profits, but receive trustee fees. The rate of interest on the investments is generally very low, for the reason that safety rather than earning capacity guides the legislature in defining eligible investments. The deposits received are not subject to check, nor are they subject to withdrawal except by pass-book and due notice of 30, 60, or 90 days, varying with the bank and the amount to be withdrawn. The pass-book constitutes the contract of deposit; the terms are described therein; entries and signatures in it become very important from a legal point of view. The depositor is moved to make the deposits by the motive of thrift and the interest inducement offered by the bank; he does not expect to withdraw them soon inasmuch as they represent his savings. He does not have the privilege of paying by check which the commercial bank accords nor does he get short-term accommodation. The savings bank invests in long-term securities and not (though recently to a limited degree in some states) in short-term commercial paper; its deposits turn slowly and it relies on its ability, within the period of notice of intended withdrawal of deposits, to sell its securities at other than sacrifice prices. Mortgages and bonds form the bulk of such a bank's investments.

2. *Joint-Stock Savings Banks.* In the West and South the dominant type of savings bank is the joint-stock bank, an institution which, like a commercial bank, is conducted for the profit of the shareholders. Deposits are received as in other savings banks, but instead of the depositors being paid a net return from the investments above expenses, they receive a definite rate of inter-

est as arranged at the time of making their deposits. The margin between the earnings of the investments and the interest paid on deposits constitutes the sum that covers expenses and profits to the stockholders. These net profits the shareholders divide on the basis of shares owned.

While joint-stock savings banks may contribute as much to the economic and social welfare as trustee savings banks, they are purely private business enterprises and not eleemosynary institutions. In the trustee savings bank the risk of high or low earnings and of loss of principal is borne by the depositor; in the joint-stock bank the shareholders assume these risks and guarantee the interest and principal to the depositor. In the former the depositors, being creators of a trust, have the control; in the joint-stock bank they are simply creditors and have no voice in its management. The mutual type prevails in New England and the eastern states where the historical and social conditions are favorable to it, where the communities are old, sentiment strong, and a philanthropic and public-spirited attitude is prevalent; it is not adapted to the West, which is dominantly commercial, nor to the South still impoverished from the Rebellion and lacking on the whole a thrifty population. The trustee who starts a mutual bank gains no financial advantage from it; in fact, he assumes a large risk and responsibility to the community. He must be a man of highest type, holding the unswerving confidence of the depositors, not only as to personal character but also as to business capacity; he acts primarily from philanthropic motives, although some lawyers and other business men may promote mutual banks for the purpose of gaining clients.

3. *Guaranty and Other Types of Savings Banks.* New Hampshire is unique in having a hybrid type of savings bank, combining the chief features of the two previously mentioned types. Instead of capital stock and shareholders, this type of savings bank has "special deposits" and "special depositors." It pays a certain stipulated rate of interest to its general depositors, and any

surplus earnings go to the special depositors. The special deposits constitute a guaranty fund for the general depositors and are limited to 10 per cent of the total deposits. Except for their name and the method of determining their amount, these special deposits have all the characteristics of the capital stock of joint-stock banks.

There are many other kinds of savings banks which are too numerous to describe here; for instance, the municipal savings banks, school savings banks, postal savings banks, and various groups of co-operative credit institutions, such as building and loan associations, farmers' co-operative credit societies, and the new farm loan bank system. The co-operative credit institutions, while formed primarily to provide on their joint credit long-term credits on realty at lower rates than the co-operators could obtain on their individual credit, tend to fulfil much the same social and economic ends as other savings banks.

Functions of Savings Banks

The essential economic and social functions of savings banks are three in number, as follows:

1. They assemble the capital of the community, conserve the idle wealth, and having aggregated it into sizable funds, loan it to business enterprisers.

2. They add to the peace and comfort and available consumption of society by providing a safe outlet for the funds of those who have the will and capacity to save but do not have the ability either to use the funds industrially themselves or to invest them with safety and profit.

3. They promote thrift more than any other financial institution.

The prudent investment of interest and accumulated principal, which together constitute savings, lessens profligacy, provides against the adversities of old age and sickness, helps the thrifty to buy a home and to enjoy better living conditions, builds

up independence and stability of character, and improves the social and political life of the community.

Functions of the Bond House and Investment Bank

Whereas savings banks aim to assemble funds for the purchase of investments, and whereas the bond houses or investment banks are concerned with the sale and distribution of securities, both promote investment from the opposite end.

In marketing securities, three groups of institutions are successively engaged: The securities are purchased by one group, are underwritten by another, and are distributed among ultimate buyers by a third. These functions overlap, it is true, and in some instances one house may perform all three of them, and the bond house may operate in any or all of these ways.

1. *Purchasing Securities.* The houses which buy first hand the largest blocks of securities are relatively few in number and strong financially, with central offices in New York, Philadelphia, Boston, or Chicago. There are, of course, in these and other cities many houses which are competent to handle somewhat smaller blocks of securities. Institutions which buy securities on a large scale must command large resources, occupy a position of financial influence, and have a record of successes which will assure the company issuing the securities of the success of the flotation. Such houses determine the direction of industrial and commercial development and the selection of the personnel of business enterprises worthy of financial support. They may act either independently or in conjunction with others.

The promoter brings his proposition to one of the financial houses at a time; if his negotiations fail he approaches another; but he will not find the financial houses actively competing with one another, nor do they actively bid for his proposition. Active competition by bond houses might result in reckless extensions of credit and overfinancing; the bankers prefer to act in a more

professional capacity and to select their clients with an eye to an intimate, confident, and permanent relationship.

A few years ago the cry arose that the financial houses constituted a "money trust," denying financial assistance to warrantable business undertakings mainly because the latter interfered or competed with the vested interests. The extensive investigations of the Pujo Committee failed to make out a conclusive case for these allegations.

In purchasing a block of municipal securities a preliminary investigation, unless it is the issue of a well-known municipality, is made by an agent who inquires into the physical and financial condition of the city to determine its ability and willingness to meet its present and prospective obligations.

The securities issued by business corporations are usually submitted to the bond houses by a representative of the company or by a promoter. The bond houses, except under very favorable conditions, refuse to handle securities of a business with which they are unfamiliar. They reject issues in excess of the physical value of the mortgaged property and they likewise refuse securities of corporations with narrow margins of net earnings above fixed charges, and of corporations owned or operated by men of low business morality.

If a favorable price can be agreed upon, accountants, engineers, and investigators are sent to make a thorough examination of the conditions, and after the proposition is finally accepted the bond house may insist upon having representation upon the board of directors until the securities are disposed of. Some houses finally handle only securities of well-established earning power. This insistence upon high quality reacts favorably upon corporate finance in general.

2. *Underwriting.* A bond house which has bought a big block of securities endangers itself by the high concentration of risk; this risk is usually distributed by having the issue underwritten by a group of banks through what is known as a "syndicate agree-

ment." There are four basic types of syndicate agreements, with several variations. It will suffice to illustrate but one type: Suppose that a bond house takes over the bond issue of a corporation at 97.5 and that a syndicate is formed, the members of which are offered and agree to take parts of the issue at 98.29 in case the public does not take them at 99.04. The bond house might be successful in closing out the issue directly to purchasers at 99.04, but rather than run the risks attendant on underwriting so large a block, it is content to make a smaller margin of profit through offering the securities to the underwriting syndicate. If the public absorbs the securities at 99.04, the underwriters make ¾ per cent for having assumed the risk; but if the market offers only 96 the underwriters take them over at 98.29, and thus tie up their funds indefinitely or until the market rises. The members of the underwriting syndicate co-operate to establish and maintain the market for the issue. Bond houses like to participate in syndicates so as to diversify their security offerings and be able to offer such a variety of investments as will be sure to attract and retain customers.

3. *Distributing Securities.* Bond and brokerage houses prefer to sell large issues at small commissions rather than small issues at larger commissions. The expense of investigating a small issue is nearly as heavy as a large issue; the selling expense per share is likely to be smaller in the case of the large issue as it can be sold in larger blocks; and the large issue probably comes from a larger, better known institution and will therefore sell more easily. The commission rates vary widely, the general range being 1½ to 10 per cent; the chief factors determining the rate are the size of the issue, the condition of the market, the borrowing corporation, and the publicity that will be required. In addition to the commission, the borrowing corporation must pay legal expenses and fees to accountants, intermediary brokers, and others, which expenses may run to a high figure.

Some bond houses have developed a clientele to whom they

sell by mail; some sell through local independent bankers on a commission basis; some have developed a great sales organization and reach old and new customers by advertisements, circulars, and traveling salesmen. A selling campaign may be very extensive and highly organized; the more underwriters the more widely dispersed will the sales be. The buyers are insurance companies, banks in smaller cities, secondary syndicates, individual trustees and estates, trust companies, savings banks, and individuals.

The bond house or syndicate manager undertaking to market an issue of securities may, particularly if the issue is a large one, have the securities listed on the stock exchange and try to sell part of the issue through that avenue. Thus a ready market is at once established and many people whose names do not appear in the lists of prospects of the various bond houses, or who prefer to buy or sell through the exchange rather than "over the counter," may be attracted and buy the securities. The sellers then proceed "to make a market," by creating a volume of transactions sufficiently large to draw the interest of brokers and speculators. The syndicate buys and sells the securities and otherwise manipulates the market, in this way controlling the price and gradually unloading the securities on the investing and speculative public. Meanwhile a campaign of publicity is being conducted in the financial press and daily newspapers.

Having investigated carefully the history, physical property, earning capacity, present and prospective business policy, and organization of the corporation before undertaking to market its securities, the bond house is in a position to recommend them to its customers. The good-will of a representative bond house achieved by conservative practice, good counsel, and painstaking service, would, of course, be endangered by recommending securities which prove to be of poor quality, and therefore customers come to put implicit confidence in its advertisements, circulars, and daily news sheets. Bond houses thus function as advisors and directors of investment.

Though the policy of the bond houses in protecting their customers varies greatly, it is not unusual for them to contract explicitly to make good their counsels and recommendations as to purchases, and if the price of securities recommended declines below the selling price, the house stands ready to repurchase and thus protect the buyer. The buyer is often protected, however, quite as much by the moral responsibility which the house feels towards its client as by an explicit contract.

Banking and Other Operations of Bond Houses

The intimate relations between a bond house and its customers are furthered by certain of its banking operations. A special department is established for the safe deposit of funds which, together with accruals of interest and additions from time to time, the depositor purposes to invest in securities offered by the bond house. The banking department also makes loans to customers who wish to purchase securities but who have not sufficient funds to pay in full at the time of purchase. In conjunction with the deposits destined for purchase of securities, the banking department may accept other deposits subject to check; this service is, however, mainly incidental. It would seem best for the investment market and the commercial bank market to be kept relatively distinct. Some investment banks by adding service to service have become general banking institutions, handling securities, savings, trusts, and deposits.

A further activity of bond houses is to act as fiscal agents for business corporations and bodies politic. The payment of dividends, interest, and principal on stocks and bonds, the flotation of their securities and their financial advertising are all matters entrusted to well-known bond houses in the central markets. Undoubtedly this arrangement improves the financial stability of the country, for in performing these operations of corporate finance the bond houses seek to build and maintain a good-will which less permanent promoters would fail to consider.

General Functions of Trust Companies

A trust is something committed to another person's care for use or management and for which an account must be rendered. The original and essential function of a trust company was to accept and handle trusts of a business nature. To execute trusts efficiently, however, the trust company found it expedient to undertake many lines of collateral business, thus adding function after function to its province until today it represents the most inclusive and complete financial institution.

A representative trust company performs the following general functions:

1. Banking functions: savings and commercial banking operations.
2. Trust and agency functions:
   (a) For individuals: private agreements, probate, investment, real estate, and insolvency operations.
   (b) For corporations: trustee of mortgages and funds, transfer agent, registrar, corporate reorganization and financing operations.
3. Insurance and safe-deposit functions.

Advantages of Corporate over Individual Trustee

A trust company can perform the various functions of trustee better than an individual. As a corporation its existence is not limited, so that it can carry through to the end any trusts committed to it, whereas the individual trustee may die or become incompetent, making it necessary to instal another trustee, with incident delay and expense. The convenience of the creator of the trust and the public is enhanced when a trust company acts as trustee rather than an individual, since it has a regular place of business, well known and open every business day. It has all the facilities for executing trusts efficiently—an organization, expert officers, a clerical staff, a legal department, a good bookkeeping and auditing system, safe-deposit vaults, a wide clientele, and

so forth. To this work it gives its almost exclusive attention, whereas an individual trustee is prone to make his trust secondary to his own business. Furthermore, the trust company is expert in the law of trusteeships and has had long experience in handling them; its customers who have created trusts with it get the benefit of its legal advice and investment ability, and thus the income from the trust is likely to be higher and the expenses lower; and the trust company is able to make temporary loans to the advantage and preservation of the estate. Finally, the trust is much safer in the hands of a company, which executes the estate in an impersonal way, free from the personal prejudices and biases common to individual trustees; which also provides a capital and surplus to protect its customers; and which desires to perpetuate the good-will of the institution. Such influences as these make for additional security.

Trust Functions for Individuals

Trusts undertaken for individuals are of various kinds and arise for numerous reasons. Persons who feel themselves incompetent to care for their estates, travelers, absentee property-owners, endowed charities or bequests, and others, commit their properties to the care and management of trust companies. Trust companies act as custodians of life insurance policies, collect the proceeds of the policies, and pay them as annuities to beneficiaries. In all such trusts the trustee's fees are stated in the trust contract, and the funds are kept distinct from the trustee's own assets and are held in the name of the trust company as trustee.

In many states the trust company is empowered by law to act as executor, administrator, trustee, guardian, and conservator. An executor is a person appointed by the terms of a will to take and execute an estate according to the terms of that document. An administrator is a person appointed by the probate court to take and execute according to the inheritance laws of the state an estate of one who has died intestate.

An "administrator with the will annexed" is a person appointed by the court to take and execute an estate when the deceased did not name an executor in the will, or when the executor named dies, refuses to act, or is incapacitated from acting. The trust company may serve in any of these capacities and in doing so take charge of the estate, subject to the supervision of the court, to which, after the final distribution of the estate according to the will or the state inheritance laws, the company makes an itemized report of all receipts and expenditures under the trust. The trust company may be appointed a guardian to care for the estates of minors, or a conservator to care for the estates of insane, idiots, habitual drunkards, spendthrifts, or others incapable of looking after their own affairs. All such duties are carried out under the surveillance of the court, to which also reports are made. The fees may be fixed by law or by the court. State statutes generally permit trust companies to act as depositories for court funds and for others acting as executors and the like.

The conduct of the trust functions of a trust company gives occasion for the investment and reinvestment of trust funds; and the trust company has funds of its own to invest. To carry out these investment operations a special department is developed which deals in high-grade securities for itself, its clients who have established trusts with it, and other customers, and functions as a bond house. One favorite line of investments is mortgages or debentures issued by mortgage bond houses, or the trust companies may issue such bonds themselves and sell them to their customers. Under investment-deposit agreements, deposits received from customers are invested in securities which are held in trust for the depositors.

Another type of service is the care of real estate committed to a trust company by private agreement, by will, or by appointment of court. This line of activity may develop into a real estate business engaged in the purchase, sale, and renting of real estate on commission.

Trust companies are permitted in some states to act as assignees, receivers, and trustees in bankruptcy. An assignee or trustee in bankruptcy cares for the just distribution of the assets of insolvent persons, firms, or corporations among their creditors. The assets are taken over, some or all of them are converted into cash, the preferred claims are paid, and the rest of the assets are distributed among the creditors on the basis of their claims. Assignees and trustees are accountable to the court having jurisdiction.

A receiver is a person or a corporation appointed by the court to take charge of a property in dispute. If the shareholders of a company or the partners of a firm are dissatisfied with its management the court may be asked to handle the property until the dispute is settled. Sometimes, although a company is insolvent, the prospect for early rehabilitation may be good and the court may appoint a receiver to handle the property during the period of recovery. On the other hand, the company may be so insolvent as to be hopeless, and the receiver may be appointed to cut down fixed charges, assess the present holders, borrow funds, and put the reorganized company on its feet again. The trust company, by reason of its experience, good credit, and financial responsibility, is well fitted to act in any of these cases.

Trust Functions for Corporations

A trust company commonly acts as trustee under the trust deed or mortgage securing an issue of bonds. It certifies to the regularity of the issue and to the genuineness of the document, but does not guarantee the value or payment of the bond. In this capacity the company acts for the interest of the bondholders, and in case of default of the issuing company it could foreclose on the property covered by the deed or mortgage.

Another trust activity is to act as fiscal agent for states, municipalities, railroads, and industrials, handling the payments relating to the bonds, coupons, interest, dividends, taxes, acting

as depository for the above corporations, receiving subscriptions to their securities, and delivering the issues.

Trust companies act as transfer agents for stocks and registrars for stocks and bonds, their duty being, in that connection, to prevent the fraudulent overissue of securities. The transfer agent cancels old certificates of stock and issues new ones in the names of the new owners. Bonds are registered as to principal or interest, or both, and usually the trustee of the mortgage underlying the bonds acts also as registrar of the bonds.

Other important operations of trust companies are connected with corporate reorganization and financing. This is a risky line of service and if the trust company is to maintain its good-will it must handle only conservative propositions. When charged with such work the trust company determines upon a plan of reorganization, recalls the outstanding certificates, distributes the new ones, makes assessments, and manages the reorganized company until it is an assured success. When a new enterprise is to be financed, the trust company investigates the concern and the value of its physical and other assets, undertakes the sale of its securities, and acts as a regular investment banker.

Insurance and Safe-Deposit Functions

Some few states permit trust companies to do a fidelity insurance and title insurance business similar to that done by regular bond or surety companies. Fidelity insurance is devoted chiefly to acting as surety for the honesty and fidelity of officers and employees holding positions of trust and responsibility. Such an arrangement is better for all concerned than to have friends go surety for the person bonded, for the person signing the bond, and for the security afforded the beneficiary named in the bond. The fidelity company receives compensation for its service, assumes the risk as an actuarial business matter, and protects the beneficiary with its known financial responsibility. Title insurance is an agreement of the trust compay to defend, at its own expense,

all litigation directed against the title insured by it, and in case of unsuccessful defense to bear losses up to the full sum insured for.

Trust companies also do a safe-deposit business, maintaining vaults so constructed as to be proof alike against burglars and mobs, fire, and water. Boxes are rented for the keeping of money, jewels, and valuable papers and access thereto is given only when the vault guard is in attendance.

While there are other minor functions performed by trust companies, those just described are the most important and indicate the wide variety and complexity of the trust banking business.

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